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WORLD PETROLEUM

Mexican Administration Attempting Formation of Government Controlled Oil Company—Is This the First Step in Establishing a Monopoly? Mexican History Shows Unfortunate Effect of Adverse Legislation on Development of Petroleum Resources

AUGUST • 1934

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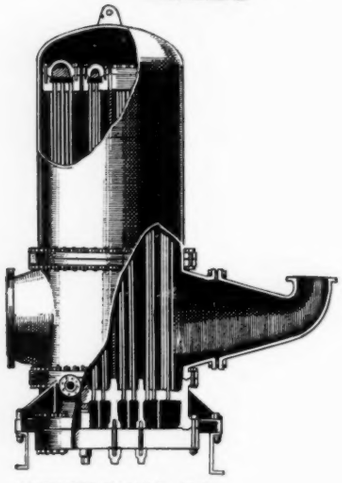

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AUGUST
1934

WORLD PETROLEUM

VOLUME V — **Editor, E. W. Mayo** — NUMBER 8

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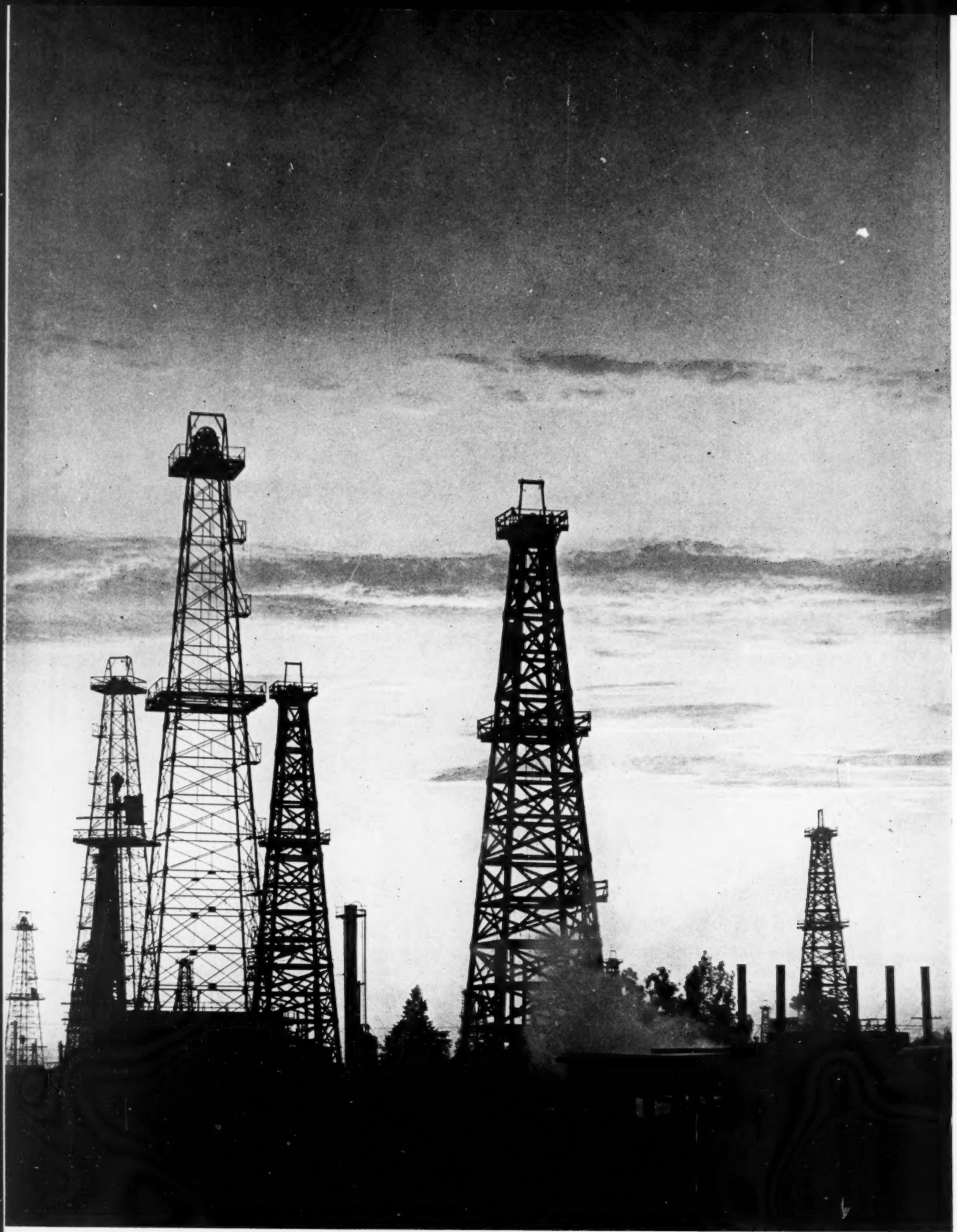

Will Connell

NEW YORK • WORLD • LONDON

PETROLEUM

Mexican Oil Policy

TEN years ago Mexico's production of petroleum was greater than that of any other country in the world except the United States. Today its yearly output is about one-sixth of its former record and it has fallen to sixth place among oil producing countries. It would be incorrect to attribute this retrogression to a single cause but undoubtedly one of the factors contributing to it has been the movement more or less actively sponsored by recent Mexican governments for the nationalization of the petroleum industry. There is reason to believe that great undeveloped oil resources exist in Mexico but private enterprise naturally is not keen to incur the risks and losses incident to the proving of new fields in view of the risk that it might not be permitted to establish ownership of such oil as it might discover.

In the effort now under way to establish a company jointly owned by the government and by private investors, advocates of nationalization see a first step toward ultimate complete control of the industry by the state. Others, who look with disfavor upon government operation of industry, fear that this may be the final outcome whether originally so intended or not.

Before embarking upon a course likely to involve the government in the management and operation of the petroleum industry, the Mexican authorities might profitably study the policy successfully followed by their South American neighbor, Venezuela. Under the wise direction of President Gomez, Venezuela has encouraged the development of her oil resources by private companies under an orderly and well regulated system which has protected the rights of the state and contributed handsomely to the national revenue. As a result Venezuela has risen to a place among the three largest oil producing countries and is one of the very few nations that has maintained its financial position unimpaired through the trying period of the depression.

The oil companies operating in Mexico have shown their readiness to cooperate with the government in any measures that recognize and protect their established rights and it is safe to say that Mexico will profit more by entrusting the future development of her petroleum resources to their hands under proper regulation than by embarking upon a doubtful scheme of government ownership and operation. The record of the years from 1910 to 1921 indicates what private initiative can do in developing the rich deposits of Mexican oil.

Iraq Oil Flowing

TO AN INDUSTRY that has been struggling for the past several years to overcome the dislocation between production and consumption that has resulted temporarily in an embarrassing oversupply, announcement, such as was carried by press despatches in Mid-July that Iraq oil had begun to reach the shores of the Mediterranean may not be looked upon as being exactly good news but at least it is interesting and important.

In view of the fact that France has been pushing for early completion of the line as a move toward gaining a position of independence in the matter of crude oil supplies, the greater part of the outflow through the Iraq pipe line for the next few months undoubtedly will go to French refineries, replacing there a certain amount of crude that has come heretofore from North or South America.

While there has been much discussion as to the effect of Iraq oil on the international situation it is probable that the increase in its volume will take place so gradually that there will be no serious upset in any of the important markets.

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Wasteful Taxation

ALTHOUGH the fact seems to be lost on legislators as a class, experience has shown that taxes levied for discriminatory purposes often fail to attain their ends. A case in point is the tax of 1d per gallon laid on heavy hydrocarbon oils in Great Britain last year. It was admitted by the Chancellor of the Exchequer in the debate on this proposal that the tax was put forward less for the revenue it might yield than as a means of reducing unemployment in the coal fields through the substitution of coal for oil.

This year, in his report, the Chancellor referred in self-congratulatory terms to the very satisfactory working of the tax as evidenced through the return of a much larger sum than had been anticipated. Even accepting the Chancellor's claim that the increase in coal consumption was due to the tax and that it thereby provided work for 2000 miners it must be observed that to pay £2,800,000 for this small increase in employment, or £1400 per head, is a costly proceeding. While the tax has hampered manufacturers, especially in meeting foreign competition, it has not resulted in any commensurate benefit to coal miners.

Mexico Prepares to Enter Oil Industry

Project for Petromex S. A. to Which Government will Subscribe Half the Capital Being Pushed Forward in Energetic Publicity Campaign. Response of Private Investors Reported Not Enthusiastic.

WHILE the establishment of an oil company to be jointly owned by the Mexican government and private citizens of Mexico, to engage in the production, refining and marketing of petroleum in competition with existing private companies and to exploit the undeveloped resources of the country has been one of the favored projects of the administration of President Abelardo Rodriguez it appears probable that completion of the undertaking will go over to the Cardenas government which is to take office next December. President-elect Cardenas has declared himself heartily in favor of the proposal and has shown his interest in it by devoting his personal attention to its possibilities both before and since his election.

As outlined in previous articles (WORLD PETROLEUM January and April, 1934) the proposed company, which was originally titled Compania Petroleos de Mexico S. A., a name which now has been officially shortened to "Petromex S. A.", is to be capitalized at 20,000,000 pesos (approximately $5,600,000 U. S.). Half the capital is to be supplied by the Mexican government in the form of oil lands, developed and undeveloped, pipeline rights and a refinery now administered by the Administrative Control of National Petroleum, a federal agency. The government's interest is to be represented by Series A stock which although constituting half the total investment is to have but 40 percent voting power.

The other half of the capital, consisting of Series B shares, has been offered for subscription to individual citizens and Mexican companies. No aliens are to be permitted to own stock or to become officers of the corporation. Control of the company, theoretically at least, will be in the hands of Series B shareholders with the restriction specified in the statutes that governmental approval will be necessary for certain acts and policies of the company. An administrative board is to be established consisting of seven members. Four of these are to be selected by Series B shareholders and three by the government.

An intensive campaign to interest private investors in subscribing to Petromex shares has been carried on under the direction of government officials. It has included the publication of articles and advertisements in newspapers and the sending of petroleum technicians throughout the country to lecture on the bright possibilities of the company and its stock.

The printed publicity drive started with attractive advertisements in newspapers and magazines and eye-catching cards in shop windows and passenger vehicles, urging Mexicans to participate in the enterprise at the rate of 100 pesos (about $28) per share. They were assured that it offered a safe and profitable investment and that the purchase of stock was an act of high nationalism. In recent full page newspaper advertisements, the Ministry declares that nationalization of petroleum is to be a fact, that the organization of Petromex will be completed soon, and that the stock undoubtedly will increase in value as soon as its first well in the Papantlazone (Vera Cruz state) is brought in. This zone is a prolongation of the Faja de Oro (Golden Strip) and Petromex will have more than 30,000 hectares of oil lands in it. It is stated that "wells drilled in this rich petroleum zone have a very great potentiality."

Minister Primo Villa Michel, who is an enthusiastic promoter of Petromex, in an interview granted to WORLD PETROLEUM, said:

"The capital of the company will be 20,000,000 pesos, divided into two series of shares. Series A stock, amounting to 50 percent of the capital has been totally subscribed by the federal government. Series B stock, amounting in value to 10,000,000 pesos, will be subscribed by the Mexican public. Of this latter stock approximately 5,000,000 pesos has been subscribed already (July 20). The success of stock sales to date has been most gratifying as nearly 5,000,000 pesos of it have been sold without the necessity of paying one centavo in sales commission."

Referring to the properties which the government will turn over to the company for its share in the capital stock Minister Villa Michel said:

"The national petroleum reserves are included within a strip of land 100 kilometers wide extending along the coasts and international borders. The total area of these reserves is 80,000,000 hectares of which 10,000,000 hectares are considered as petroliferous by geologists. These 10,000,000 hectares are at the disposition of Petromex and in them are more than 500,000 hectares of recognized petroliferous lands, and more than 2,000 hectares of productive lands, located in zones of proven production. Petromex will have facilities for transporting its production as the federal government will permit it to enjoy the right which the law concedes the government to use 20 percent of the capacity of public and private oil pipelines that already exist in the Republic or will be constructed.

"The Administrative Control's refinery, which will be turned over to Petromex, has a daily capacity of 1,500 bbl. and is at Tampico. Petromex will increase its refining capacity as much as is necessary to obtain fuel oil that is indispensable for the National Railways of Mexico which consume nearly 12,000 bbl. daily.

"Officials in Mexico and abroad of Petromex have not yet been designated. They will be appointed at the constitutive assembly of the company's administrative board, which will be elected soon. The board will also designate the number and place of foreign agencies and will later name agents.

"Petromex proposes to assure petroleum and by-product supplies for domestic consumption, and especially to cater to the necessities of the National Railways and federal government departments which account for approximately 40 percent of Mexico's total consumption. Petromex's competition with private petroleum companies will be strictly commercial and within the dispositions that are established for all companies, and by the petroleum law."

While this statement of the plans and prospects of the projected company may be accepted as representing the official position and would seem to point to the early completion of the enterprise reports persist in business circles in Mexico City that the financial outlook of the company

is not altogether clear. According to these reports subscriptions to the stock publicity offered that have been received thus far have come largely from interests associated with the National Railways of Mexico and other companies that are extensive users of fuel oil or gasoline and that may be in a position to benefit in their purchases through association with the company. According to gossip in financial circles the farmers, motor vehicle owners and small industrialists to whom the government looked for a large part of the public subscription have shown little enthusiasm for the proposal.

In case the public response is insufficient to provide the needed capital it may be that some other plan of financing will be brought forward. A proposal was advanced at one time to interest holders of Mexican bonds in exchanging some of their bonds for securities of the petroleum company but whether this plan has been rejected or only pushed into the background is not entirely clear. At any rate the federal authorities concerned are still keen to carry through the plans for the company and undoubtedly will exert every effort to place it in successful operation.

In the article previously referred to in relation to the proposed company it was stated that it would begin operation with a daily production of about 6,000 bbl. of crude. It is now said that a daily output of 2,500 bbl. is assured from properties to be taken over from the Administrative Control and that the remaining 3,500 bbl. will be easily obtained.

No statement has been made as to the prices at which Petromex will sell gasoline and fuel oil beyond the announcement that its competition with existing companies will be "on a commercial basis." Prices will be fixed by the administrative board. Fuel oil is now selling in Mexico City at 5.50 pesos (about $1.54) the barrel and gasoline sells at 20.46 cents U. S. per gallon including a tax of 8.56 cents. The National Railways buys fuel oil at varying prices, some of them comparatively low under contracts made two or three years ago and others somewhat higher under more recent contracts.

The attitude of the private companies now operating in Mexico toward the new project is not unfriendly. Their officials say that they regard it in the same light as any other commercial competitor and express willingness to accord it the same facilities as they would any other company in their line. At the same time there is a not unnatural feeling that there may develop in future a tendency to extend preferred treatment to a company in which the government is heavily interested, particularly if it should encounter financial difficulties in the course of its operations. Business men who are not connected with oil companies but who have an inherent distrust of government engaging in business feel that from a national viewpoint the development of the petroleum resources of the country would be better served if they were entrusted under proper safeguards to established organizations of long experience and ample capital rather than to attempt to attain the same object through a company which in the nature of things must be largely subject to political direction and control.

Mexican Development Retarded by Changing Oil Policy

THE OCCURRENCE of oil and gas seeps in Mexico has been known from the earliest times, but it was not until Col. Drake and his historic well had made the world petroleum conscious that the Mexicans began to pay more than passing notice to these indications of natural wealth. In 1864 a few wells were sunk by primitive methods in the region north of the Panuco River, whence operations on a small scale were extended over the central region of Tamaulipas and the northern part of the State of Vera Cruz. Real commercial operation did not begin, however, until about 1886, when a well flowing at 180 meters was put down in Tabasco. This gave an impetus to systematic exploration, and by 1901 several good wells were producing in the El Ebano field, lying between Tampico and San Luis Potosi.

Notwithstanding these propitious beginnings the potentialities of Mexico as a source of petroleum did not attract world wide attention until 1908, when a huge well—San Diego de la Mar No. 3—on the Gulf Coast, caught fire and burned for two months before it could be brought under control. This spectacular incident literally "lit Mexico's oil lamp" and effectively stimulated the interest of capitalists. Foreign money, principally American and British, poured in, and by 1910 a number of strongly flowing wells were producing in Vera Cruz, the most notable of these wells being in the Tuxpam area and the Panuco River basin.

For a decade after 1910 the history of oil production in Mexico was marked by continuous development and expansion; the number of proven fields increased every year, with many instances of marvelous oil strikes and individual wells unmatched for the violence and volume of their outflow. Beginning in 1910 (which may be taken as the initial date of modern Mexico's oil industry) with an annual production of 3,634,000 bbl. production was stepped up in 1911 to 12,553,000 bbl. and in 1918 had reached 63,828,000 bbl. With this achievement Mexico took rank as the second largest oil producing region in the world. But the next six years were to prove that even this was less than half of what the Mexican oil fields could do. In 1920 production attained 157,069,000 bbl., which was raised the next year to 193,398,000 bbl. This proved to be the peak. After 1921 a decline set in. By 1926 production had fallen to less than 100,000,000 bbl. and in 1933 had shrunk to 33,245,000 bbl., which is little more than was produced in 1915.

During the period of greatest development the Mexican fields were characterized by the extraordinary productivity of individual wells; prior to 1917 less than 300 wells had been drilled by modern methods; of these 174 were producers, and for a time they were yielding oil at a daily rate of 643,109 bbl.

In the meantime a Mexican oil refining industry began to arise. The first small refining plant was erected in Vera Cruz in 1870, but no others followed until the Pierce Oil Co. set up a refinery in 1909. When the great Mexican oil boom really began in earnest, refinery construction was pushed and by 1927 Mexico had 19 important refineries with a combined capacity of 435,312 bbl., which later

events proved to be more than sufficient. For many years most of the production has been exported in the form of refined or semi-refined products. The United States has taken about 70 percent, Europe about 15 percent, and Central America the rest; in 1926 Mexico itself was consuming 15,725,000 bbl. In various other respects Mexico was equipped for oil business on a grand scale. By June, 1927, there were pipelines totaling 2,914 miles in length, and storage capacity was available for 82,716,000 bbl. of crude oil and its products.

As may be seen from the yearly production figures accompanying this article the modern statistical history of Mexican oil divides itself into three periods. First the period 1909–19 when the industry was gathering strength, then the great boom of 1920–24, and finally the period of recession, which began to be noticeable in 1925 and has continued to this day.

One reason for the decline of Mexican oil production is that oil pools are in the nature of things not inexhaustible; there must eventually come a time when the flow of oil is replaced by water, and this has occurred repeatedly in Mexico. Normally, the oilman's answer to water is to move his rig to another location and production is thus kept up, but evidently this normal process has not been sufficient to enable Mexico to maintain her rank as an oil producing country. The reasons are partly natural and to a large extent politico-economic.

The politico-economic history of Mexican oil is mainly a record of conflict between two opposing concepts respecting property rights in mineral deposits. The old Anglo-Saxon concept is that the owner of the land controls not only the surface but also everything beneath the surface as far as the center of the earth. The concept that prevails in many other countries is that ownership of minerals contained in the subsoil vests in the state, which may itself exploit them or dictate to the owner of the land the terms under which he may extract minerals from his holdings. Another Anglo-Saxon concept is that no man may be deprived of property by the state without just compensation.

The doctrine of state subsoil rights in Spanish-America was expressly asserted in the "Leyes de Las Indias" promulgated by the Spanish king in 1510. So far as Mexico is concerned this doctrine prevailed more or less until the presidency of Porfirio Diaz. The latter was anxious to attract capital to the development of Mexico's resources, so the mining laws of 1884, based on the constitution of 1857 and amplified in 1892 and 1909, gave to land owners property rights to exploit minerals, including petroleum, that might be found in their subsoil. As a result business men from the United States and Europe acquired titles in fee to tracts known or supposed to contain oil, in confidence that they held full property rights and invested millions of dollars in locating and handling Mexican petroleum.

Mexican Oil Production
1909–1933

Year	Bbl.
1910	3,634,000
1911	12,553,000
1912	16,558,000
1913	25,696,000
1914	26,235,000
1915	32,911,000
1916	40,546,000
1917	55,293,000
1918	63,828,006
1919	87,073,000
1920	157,069,000
1921	193,398,000
1922	182,278,000
1923	149,585,000
1924	139,678,000
1925	115,515,000
1926	90,421,000
1927	64,121,000
1928	50,150,000
1929	44,687,000
1930	39,529,000
1931	33,038,000
1932	32,082,000
1933	33,245,000

With the fall of Diaz there began a long series of revolutionary disturbances in Mexico, with the inevitable result of throwing the national finances into disorder. But throughout this era of political turmoil and fiscal distress the oil industry carried on and increased its expansion. Such prosperity could not escape the attention of the hard-pressed political chiefs. The oil fields were bearing a heavy taxation, but this was not enough. All petroleum under the soil was declared the property of the nation.

This declaration was made in Art. 27 of a new constitution promulgated in 1917. Reduced to its lowest terms, this article would require occupants of producing oil lands, who thought they owned the property in fee, to repurchase their holding from the government on terms suitable to the latter, and besides paying taxes pay royalties to the government. The efforts of the Obregon government to make this constitutional provision effective had two results. It brought about diplomatic intervention by the United States to uphold the Anglo-Saxon notion of property rights acquired under the Diaz laws, and to protect American citizens from expropriation without compensation, and it had the further effect of checking all new developments by outside investors, who refused either to surrender their titles or to recognize the legality of the government's action by taking out permits to drill new wells. Production fell off, because new areas were not being tapped. After protracted discussion an agreement was reached with President Obregon, and for a time it appeared that the oil companies were again in secure possession of private rights. Obregon's successor, President Calles, refused to be bound by this agreement and again asserted national ownership. The United States again came to the support of its nationals, until through the skillful diplomacy of Ambassador Dwight Morrow its view finally prevailed so far as rights acquired prior to 1917 are concerned. Rights acquired after that date remain subject to the principle of nationalization and to whatever handicaps may accompany that situation.

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Liquidation of Austrian Cartel

THE AUSTRIAN gasoline market has fallen into complete disorder as a result of the liquidation of the previously existing cartel which the two larger groups were systematically flouting; the result is a price war which is bringing loss to all concerned. Lately efforts have begun to restore the cartel on the basis of a minimum price fixed by the Government. Under the new plan the Government is to control imports so as to make the standard price really effective, and to placate the agriculturists all gasoline must carry a certain percentage of alcohol. At last accounts the agreement was being held up by a dispute as to the proportion of alcohol, with the Vacuum Oil group willing to accept five percent, and the Shell group holding out for 3.75 percent.

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GEOLOGISTS have at length come to the conclusion that oil pools may underlie the bitumen areas in the Dead Sea region, and representatives of various petroleum companies are now engaged in systematic exploration of the district.

British Tax Injures Oil Trade

Controversy Over Heavy Oil Tax Designed to Aid Coal Industry Flares up in Parliament and Press. Lobitos Refinery to Open Soon. Imports Increase Fifteen Percent in June.

CONTROVERSY on the oil versus coal question continues both in and out of Parliament. In the House of Commons, criticism of the 1d. per gallon tax on heavy oils was expressed by the moving of numerous amendments to the Finance Bill, 1934–35. One proposal was to remit the duty on oils used by public utility companies on the ground that the increase in production costs of electricity companies and other producers of light and power hinders industrial development and handicaps the recovery of unemployment. Another amendment proposed that relief from the duty on heavy hydrocarbon oils used as fuel for vessels in home waters should be extended to vessels engaged on canals and inland waterways. These adjustments of the duty were opposed by the Government, and were defeated on a vote. A more direct attack was made by the amendment to the Bill to repeal the duty on heavy oils altogether on the ground that the duty penalises those industries which have put in modern machinery to consume oil and produce power economically.

Mr. Chamberlain's reply to this proposal was notable for statistics purporting to show the effect of the tax on British coal mining. The Chancellor claimed that trade to the extent of 378,000 tons had been regained from oil, and that a further 95,000 tons a year would have been lost if the tax on heavy oil had not been imposed. He added that as contracts now in force terminated, the gain of coal at the expense of oil would be increased. This is, of course, a measure of the damage done to the oil importing and distributing industry by the duty.

Outside Parliament, differences of view on the heavy oil tax have been evident in numerous statements and heavy press correspondence between the protagonists of oil and coal. The controversy has even involved such a substantial body as the Institution of Petroleum Technologists. As a matter of course, the defenders of the heavy oil tax are mostly those concerned either with the "Back to Coal" movement or with the coal and coal-oil industries, and their point of view reflects the Government attitude that the British coal mining industry must be protected from the loss of employment which would be involved by allowing it to stand on its own economic feet. Independent observers who have intervened in the controversy reflect the widespread belief that the tax was imposed without a full realisation of its effect on the manufacturing costs of consumers. Numerous reference to the adverse results of the tax on costs have been made by consumers themselves.

Taxation of heavy oil is not the only oil subject which has roused Parliamentary feelings, the Petroleum (Production) Bill having a rather rough passage through the Commons. Interest in this debate was centered largely on the speeches of the Marquess of Hartington, on whose family estates in Derbyshire the only producing oilfield in Britain is situated. Behind the numerous amendments proposed by opponents of the new measure were two fundamental objections. One was that since the Bill vests oil rights in the Government, it can be considered confiscatory, and the other was a widespread impression in Parliamentary circles that the introduction of the Bill was instigated by some influence which the Government had not disclosed. The Government reply was that the Bill had been drafted without consultation with any oil interest, although information as to who had been consulted was refused. The new legislation is stated to be merely a precaution against complications which might arise if oil were found in large quantities in the country.

Lobitos Oilfields' new refinery at Ellesmere Port on the Manchester Ship Canal is rapidly approaching completion, and is to be opened officially in a few weeks. Meanwhile, a first shipment of crude from the company's Peruvian operating concern, Compania Petrolera Lobitos, has already arrived in one of the Lobitos tankers. Although the new development is important from the point of view of the Lobitos company, it is not likely to make any very serious addition to the volume of products available in the British market. Lobitos production has recently been running at something like 150,000 bbl. a month, equivalent to about 2½ percent of total British imports of petroleum products, and only a part of the crude produced will be brought to Great Britain.

The latest cut in motor spirit prices has so far checked the activities of independent distributors that no further reduction has been called for. No one pretends, however, that the current level of selling values is satisfactory, for quotations have been reduced to a figure which does not provide anything approaching a reasonable profit margin, even to the most efficient and economical distributing concerns. The attitude of the national group to independent distributors was summarised by Lord Bearsted, the Shell Transport chairman, at the annual meeting when, in reply to a question by a shareholder, he said that low prices did not aim at the extermination of competitors but were merely designed to protect the trade of Shell against undercutting. As an explanation of the motor spirit price changes which sometimes mystify the motoring public, this statement deserves wider publicity than it has yet received. With selling prices at anything near their present unremunerative level, the national distributors are naturally concerned to obtain as high a price as possible.

June imports of petroleum and products into Great Britain increased 15 percent compared with imports for the corresponding month of last year. Petroleum imports for the first half year showed an increase of well over 10 percent, indicating a considerably increased demand for petroleum products in Great Britain. While the increase in June was largely due to the importation of greater quantities of crude, the increase was well spread between all products.

British Imports by Products

(Barrels)

	June 1934	Six months to June 30 1934	Six months to June 30 1933
Lamp oil	385,600	3,254,028	2,544,618
Motor spirit	2,851,086	15,723,457	15,593,519
Lubricating oil	211,714	1,469,687	1,383,789
Gas oil	296,171	1,877,800	1,622,262
Fuel oil	1,484,200	8,617,888	7,821,878
Other sorts	28,029	335,883	221,379
Total products	5,256,800	31,278,743	29,187,445
Crude	1,580,371	7,123,857	5,504,139
Total imports	6,837,381	38,402,600	34,691,584

Work in one of Italy's producing fields: hauling casing at Neviano-Valezza

Italian Petroleum Regulations Approved

Interpretation and Application Must Follow Publication, After Which Active Refinery Construction Will Commence. Domestic Oil Receives Protection.

By T. Orchard Lisle

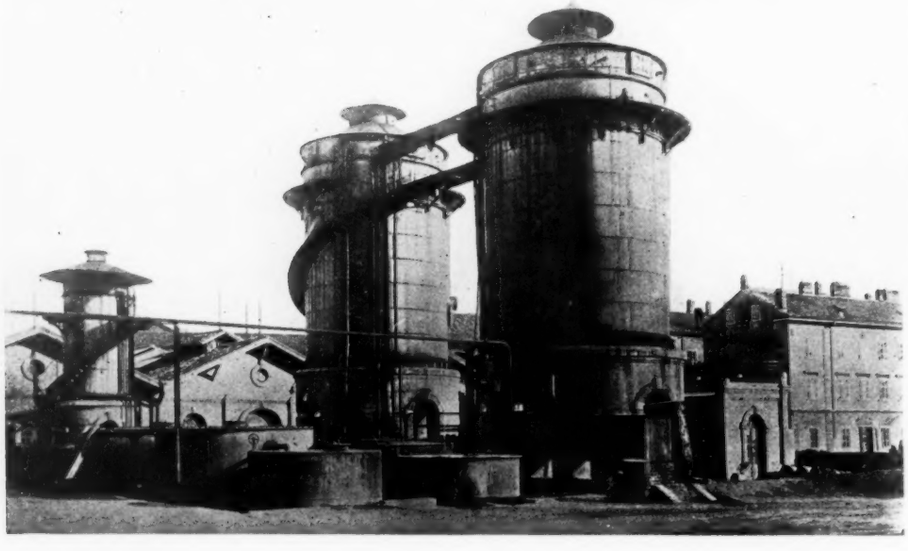
ROME, 30 JUNE.

AWAITED for months by national and international oil interests operating in Italy, the regulations of the new petroleum decree were approved today by the Council of Ministries. Publication of these regulations will follow in from two to six weeks, possibly before these words appear in print, when they will automatically become law and available for study. Publication is to be followed by interpretation and application, including the granting of import and refining concessions that are to be effective on January 1, 1935.

Interpretation and application involve many difficult problems for the Ministry of Corporations and other ministries concerned, as applications already have been filed for import licenses equal to five times the annual consumption of the country.

Consequently, as I write the Fascist government's oil policy is still in a condition of flux and such important matters as deciding whether only a very limited number of large refineries shall be allowed, or whether, in the government's opinion, a larger number of small plants scattered over the country is more desirable, are still indefinite. As stated in an article published by WORLD PETROLEUM in March, 1934, it is the intention of the Italian authorities to give due respect to the rights of oil companies already established in Italy when granting concessions. This will aid in a satisfactory solution of the existing cracking plant problem, referred to in this article.

An established Italian refinery: group agitators at the Fiume Plant of Raffineria di Olii Minerali, S. A.



Because of the unsettled position, and because of the present impossibility of completing refinery plans, the publication by this journal of the complete presentation of the Italian program—after consultation with the authorities—has been deferred until October next, when a comprehensive picture of the Italian oil industry under the new regime will be presented.

One vital matter also settled today is to be found in a ruling distinct from the regulations dealing with imports. This is a decision to grant protection to petroleum products refined from domestic crude oil, of which Italy produces about 220,000 bbl. per annum. This decision ends the suspense of those oil companies that have expended large sums in active exploitation and drilling—particularly during the past three years.

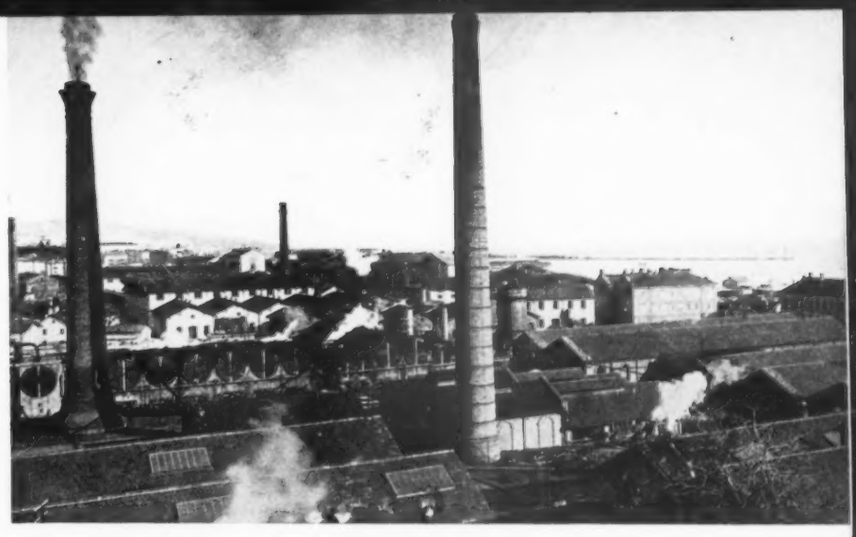
Up to the publication of the new customs duties and sales taxes, February 7 last, when the duty and ad valorem tax on imported crude oil were eliminated and replaced by a sales tax, domestic crude producers enjoyed a preferential of 22 lire per quintal (100 kilos or 220 lbs.) plus 2.40 lire ad valorem. This is about $3.50 per U. S. barrel. Temporarily, this preferential has been entirely removed, involving heavy operating losses to the producers due to Italy's oil wells being small pumpers

yielding but a few gallons to a maximum of 250 bbl. per day. Under this separate decision protection will be given to the extent necessary to enable the producers to continue exploring and working their oil concessions with a margin of profit. It will be retroactive to February 7 last.

In like manner the three plants erected to crack imported fuel oil suffered when the new decree deprived them of the protection on gasoline and kerosene hitherto received, to the extent that it is impossible to operate the plants without heavy losses. In fact, partly as a result, two of the three cracking plants have just been sold. Their present position may not be changed until they have been rebuilt as complete refineries, or modified to handle crude economically. Hence, it is obvious that work will have to proceed with rapidity as soon as the oil companies concerned have complete knowledge as to what their concessions will permit, and when any differences under dispute have been satisfactorily settled.

While there is no doubt that the Fascist government desires to avoid repeating the costly mistakes made in some other countries that have hampered development and marketing and that have reduced revenues, the question of national defense seems paramount; increasing the national revenue is second, and the provision of an economical oil industry comes third in importance. Included in its policy is the prevention of destructive competition. Where errors of judgment may have occurred, some of which no doubt could have been avoided in advance, it is to be hoped that rectifications will be made when the regulations are interpreted and applied.

In studying the Italian petroleum situation it is necessary to turn back to the decree of November 25, 1926, which granted exemption from the customs duty of 22 lire per quintal, plus the sales tax, to all imports of residues (such as fuel oil) for cracking purposes. This gave a total protection of 88.10 lire to gasoline refined in the country.



Stills and warehouses of the Fiume refinery.

As a result of this protection to domestic refining, three cracking plants,—the NAFTA (Shell) at Spezia; the BENIT (Petrofina) at Naples, and the DICSA at Venice—were erected. Domestic production of gasoline from imported crude, which was but 112,000 bbl. in 1928, jumped to 1,296,000 bbl. in 1933. This was beyond the government's anticipation, and naturally resulted in an important decrease of customs revenue, while the cracking plants made excellent profits.

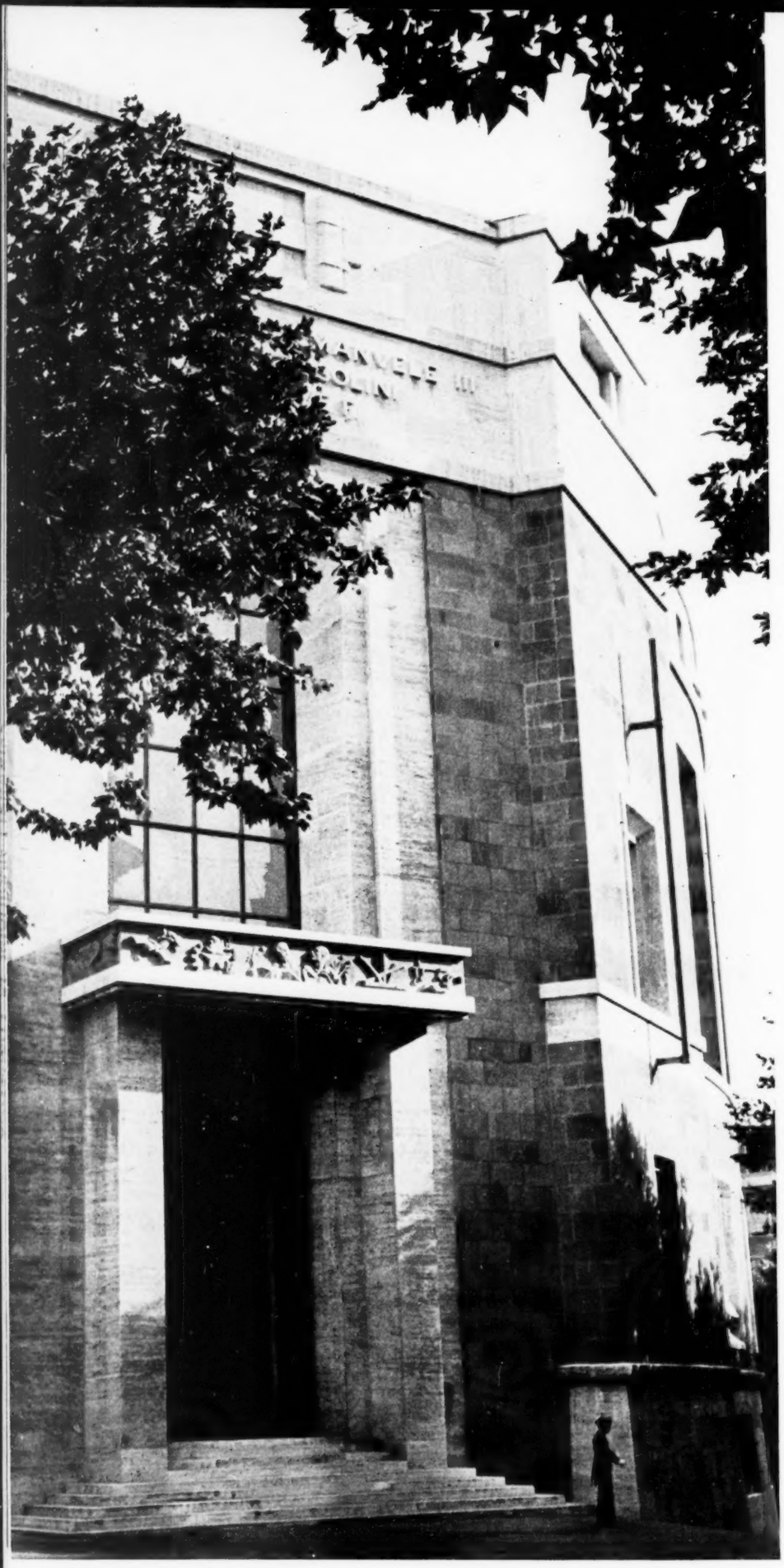
In order to reduce these revenue losses to the Treasury the Ministers proposed certain revisions. Negotiations were carried on for a prolonged period, but no agreement was arrived at, despite the fact that NAFTA recognized the fairness of some reasonable revision and was willing to accept a modified arrangement. Consequently, the government drafted a new petroleum decree, which became law when published in the Official Gazette on December 30, 1933. It is this decree which completely changes the position of the oil industry for both national and international companies.

Since that date the drafting, approval, publication, interpretation and application of regulations to give effect to this decree have been pending, and meanwhile the domestic oil business is in an unsettled state. Nobody knows exactly how he stands, with everybody hoping for the best. A number of the features are considered to be adverse to the best interests of the industry, and it is hoped that these will be modified and ironed out in a satisfactory manner.

On February 7 of this year new customs duties were issued which eliminated the tariff on crude oil, as well as the 15 percent ad valorem. A high sales tax was imposed upon products, and certain lower duties were retained on imported refined products. The new decree and the revised customs duties and sales taxes were fully discussed in the March, 1934, issue of WORLD PETROLEUM, where the customs order was incorrectly referred to as the "new regulations." It may be noted now that in addition to crude oil, fuel oil for naval and merchant marine purposes is also admitted free of duty, but heavy crude oil imported for direct use, such as burning under boilers, is subject to 10 percent ad valorem plus 0.40 lire per quintal and no sales tax, while Diesel oil pays 15 percent ad valorem plus 10 lire per quintal sales tax.

It is interesting to study the revised duties and taxes on gasoline at today's prices, and their effect on the import and refining branches of the industry.

Tabiano-Salsomaggiore, an Italian producing field. The field has been extended to the hill on the right.



New building of the Ministry of Corporations, Rome, where the work of ruling on the application of the new oil regulations is being carried forward

GASOLINE

Old Duties and Taxes (Lire per 100 kg.)		New Duties and Taxes (Lire per 100 kg.)	
Duty	88.10	Duty	12.00
Ad Valorem	5.00	Sales Tax	161.00
Sales Tax	80.00		
Total	173.10	Total	173.00

As crude oil for refining is now admitted duty free it means that the preferential given to gasoline refined in the country from imported crude is about three cents per U. S. gallon over imported gasoline, while lubricating oil has approximately seven cents protection. But this is not all. While crude import concessions will be granted for 20 years (and even extended when after a few years it becomes necessary to modernize the new refineries), the maximum period of a refined-product license will be three years. Furthermore, indications are that after the three-year period importations of refined petroleum will be stopped, except, perhaps, fuel oil in the event of domestic refineries being unable to meet the demand.

There can be no question that any oil company having a substantial business in Italy, and wishing to retain its market, will have to build a refinery or re-construct its cracking plant. Otherwise, it will be placed in an untenable position. In fact, it is possible that it will be unfortunate for a few marketers whose trade is not large enough to justify a refinery.

On the face of things it would seem that the price to the consumer need not necessarily be changed since the total tax remains the same. In actual practice, however, higher prices must result because experience has proved that it is more costly to refine oil at the point of consumption than at the point of production. Of course, more stabilized conditions in the United States oil industry will tend in any case to bring about higher world crude oil values. But, in the eyes of the Italian government, the question of national defense has greater importance, and most of the oil companies have accepted this particular policy.

Just at the moment no oil company can do more than project its refinery construction plans in a tentative way along the lines of its requirements, because it must await a study of the regulations and the granting of concessions to import crude and build refineries, as well as the selection of locations. But these factors are matters only of weeks or a few months, and indications are that where permits are obtained some, if not all, the approved projects will be under way by the end of the current year. Naturally, there may be some disappointments due to governmental blue-penciling of projects.

At any rate extensive construction work will be carried out in Italy, provided the licenses are granted. Socony-Vacuum has purchased control of the BENIT

cracking plant at Naples (855,000 bbl.) contingent upon receiving a concession to import crude and to produce both lubricating oil and white products. For this purpose the plant will be rebuilt and enlarged to a complete refinery. Hitherto, Vacuum has marketed only lubricating oil in this country, but BENIT has been producing gasoline and kerosene. The AGIP (government-controlled) has purchased the DICSA cracking plant at Venice with the idea of reconstructing it to a complete refinery. This company probably will modernize its refinery at Fiume (350,000 bbl.) increasing its capacity for the output of lubricating oil. It may also build a new refinery.

The SIAP (subsidiary of Jersey Standard) probably will enlarge its refinery at Trieste (now of 400,000 bbl. capacity) and is considering the construction of another plant on the west coast. NAFTA (Royal Dutch-Shell group) is understood to be contemplating the reconstruction and enlargement of its Spezia cracking plant and the erection of a new refinery at a point approved by the Supreme Council of Defence. The present capacity at Spezia is 1,000,000 bbl.

Other companies which have filed applications for concessions in order to protect their present interests in the Italian market are Union Importatori Lubrificanti (Gulf Oil Corporation) and The Texas Company. If the regulations when published are such as to require domestic refining they probably will build new plants or acquire and reconstruct existing ones. Petrolea (Soyusnefteexport) also expects to build a refinery to handle its trade in refined products except bunker oil. The possibility of these and other projects depends upon governmental action as the Italian government has indicated that it will not permit refinery construction to be expanded beyond what it regards as suitable dimensions.

All locations for refineries must be passed upon by the Supreme Council of Defence after the Ministry of Corporations and the Ministry of Finance have made their recommendations. One phase of the situation that eventually may become of serious concern to oil companies that build refineries is the apparent present intention of the Fascist government to give special encouragement to the fullest use of crude oil from domestic sources, from the Italian colonies, from Albania, and from concessions in Iraq when oil is produced there in commercial quantities by Mosul Oil Fields Ltd. in which Italy has part ownership through the AGIP. Proposals are that for the first five years crude run through the refineries is to be 25 percent from these sources, later 50 percent, and ultimately a maximum of 75 percent. In actuality it may not be possible to accomplish this plan. In any event, for world oil stabilization and general economical reasons, and in fairness to international oil interests that already have developed their world sources of crude at enormous expense, it is hoped and felt that the government will not enforce such a policy to a point where it will impose hardship, particularly as it is equally important for a country like Italy to have some oil reserves in sight. Incidentally, each oil company under the new law is obligated to carry stocks at refineries equal to 25 percent of its total imports.

Imports (of Petroleum into Italy) and Domestic Production—1933

Product	Metric Tons	U. S. Barrels
Gasoline	290,833	2,326,564
Kerosene	137,264	1,029,480
Lube oil	66,888	468,216
Fuel oil, Diesel oil, etc.	1,080,691	7,564,837
Crude oil	135,224	946,568
Heavy residues	3,255	23,016
Bunker & Naval fuel	828,000	5,500,000
Total	2,542,155	17,858,681
Domestic crude production	26,000	183,000
Grand total	2,568,155	18,041,681

The quantity of petroleum products from local cracking plants and refineries last year amounted to 441,371 tons, or nearly 3,528,000 bbl., including the products from domestic crude.

Allowing for a certain amount of growth in consumption, and also assuming that naval and bunker oil will continue to be imported, a total construction and reconstruction program of 10,000,000 to 12,000,000 bbl. annual throughput of crude seems necessary. Last year over 2,000,000 bbl. of fuel oil was imported for cracking into gasoline and kerosene, and this particular import will have to be replaced by about 3,400,000 bbl. of crude.

Nineteen wells in the Italian oilfield east of Valezza

Iraq Geology

GISEMENTS Petroliferes de l'Iraq (Petroleum Deposits of Iraq), by G. P. Nicolescu (Les Presses Modernes); 1933; 221 pages.

In this interesting book the author summarizes the present-day knowledge concerning the structure of the Iraq petroleum deposits. It is a book that will prove useful and informing to every oil technologist who has or expects to have contact with these deposits, which bid fair to justify the present estimate that they are the richest in the world. The author has previously written authoritatively on the oil fields of Persia, and on the basis of his knowledge of Persian geology he is able to point out the very close relations of the two fields. The book should be of nearly equal value to the archaeologist, because it gives an illuminating history of geological happenings that throw much light on the conditions under which the ancient Mesopotamian civilizations have evolved.

World Wide Rise in Oil Demand

Increase of 4,000,000 Tons in Consumption During First Half of 1934 Indicated by Available Statistics—Gain Extends to All Countries and All Classes of Products.

CONSUMPTION of petroleum products during the first half of 1934 has shown a remarkable increase over the corresponding period of 1933 in practically all parts of the world. As shown in a previous article (WORLD PETROLEUM, April 1934) consumption of motor fuel has risen continuously from the beginning of the motor car era, interrupted only in 1932. The decline in that year was widespread though not universal. It was felt most severely in the United States where it amounted to seven percent against only three percent for the rest of the world. In 1933 the curve of consumption began slowly to rise but here again the recovery was less pronounced in the United States, being only a little over one percent as compared with four percent for other countries.

In 1934, however, the rise in demand for all petroleum products has assumed much more substantial proportions and has been much more uniform in all quarters of the globe. The fact that there has been a general increase may be accepted as evidence of a world-wide improvement in industrial conditions. Special measures adopted in certain countries in the effort to shake off the grip of depression appear to have exerted only a minor influence since the gain has been equally marked where the movement toward recovery has been allowed to take its natural course.

While complete statistics for the first six months of 1934 are not available from all countries the figures in hand and reports from leading operators indicate that the average increase in the use of motor fuel during the first half of 1934 as compared with the corresponding period of the year preceding has been close to 10 percent or roundly 4,000,000 tons. This represents an added demand for crude oil of between 70,000,000 and 80,000,000 bbl. and it has been a factor of chief importance contributing to greater stability in the world's markets.

There is naturally a close relation between the consumption of motor fuel and the number of motor vehicles in operation. According to the records of the National Automobile Chamber of Commerce new registrations of passenger motor cars in the United States in the first five months of 1934 as compared with the same period of last year have been as indicated in the accompanying table.

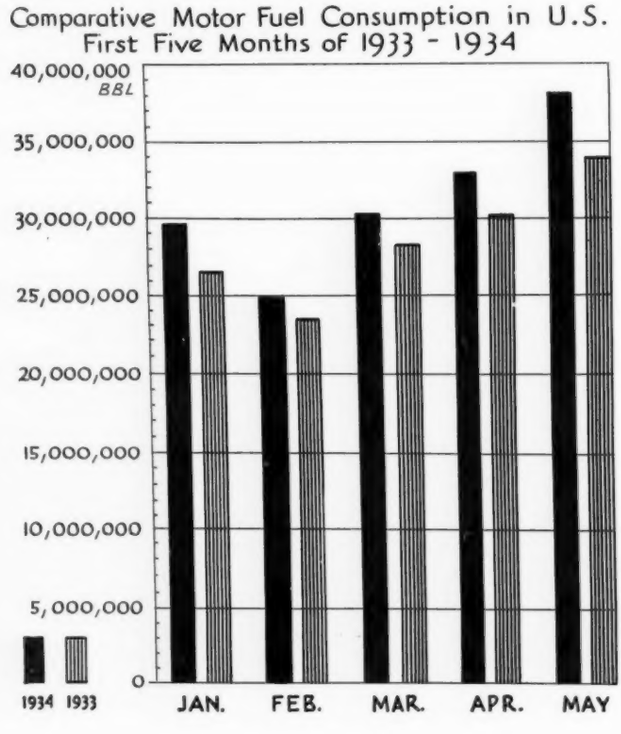
New Passenger Car Registration

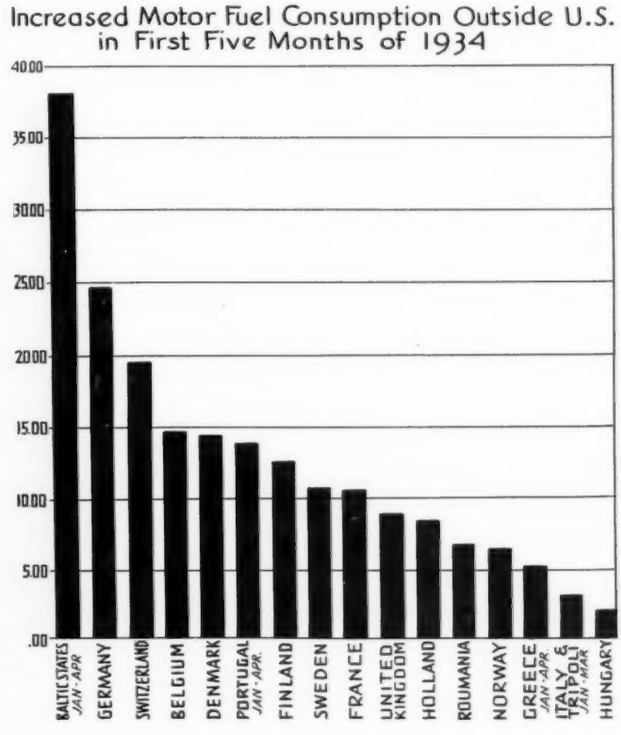
Month	1934	1933	Percentage Change
January	61,242	79,845	− 23.3
February	94,887	69,471	+ 36.5
March	173,287	78,749	+120.0
April	222,900	119,972	+ 85.8
May	219,163	160,225	+ 36.7

The accompanying tabulation, it will be observed, does not include commercial vehicles. Registrations of all classes of motor cars in the United States reached their high point in 1930 with a total of 26,545,281. By December, 1932 they had decreased to 24,115,129 and on December 31, 1933, the total had fallen still further, to 23,827,290. Motor fuel consumption, however, was at its highest in 1931. It reached its low level in February 1933. It began to rise in the following month and during the latter part of 1933 ran steadily higher. The figures in the accompanying table give in barrels the domestic demand for motor fuel in the United States during the first five months of 1934 and 1933.

U. S. Domestic Motor Fuel Demand

	1934	1933
January	29,519,000	26,510,000
February	24,947,000	23,312,000
March	30,335,000	28,227,000
April	32,735,000	30,176,000
May	38,141,000	33,999,000
Total	155,677,000	142,224,000





The increase for this five month period as compared with the same months in 1933 therefore was nearly 9.5 percent. Figures for June in the two years are not comparable owing to the heavy stocking up that took place in June 1933 in anticipation of the application of the code.

For other countries statistics of motor vehicles are not so fully up-to-date but some interesting figures are available showing the growth in motor registrations in Europe during 1933. The tabulation given herewith shows comparative records for Europe as a whole and for some of the countries in which notable increases in the number of vehicles in operation have taken place:

Motor Vehicles in Operation in Europe

	Dec. 1932	Dec. 1933	Inc. Percent
Soviet Union	60,324	110,000	81
Irish Free State	44,018	51,015	16
Czechoslovakia	85,500	99,030	15
Balkan States	46,696	53,246	14
France	1,712,890	1,855,174	8
Italy	317,796	341,282	7
United Kingdom	1,613,119	1,708,016	6
Europe	5,511,307	5,978,891	8.1

As will be seen from the table showing motor vehicles in operation in Europe the largest proportional gain in motor vehicles took place in the Soviet Union while the greatest numerical increases were in France and the United Kingdom. For Europe as a whole the expansion in motor vehicles was 8.1 percent or slightly more than the gain in motor fuel consumption which was six percent. Reports from trade organizations indicate that during the past six months the rise in demand for motor fuel has been accelerated and has been 10 percent or more above that for the first half of 1933.

Reports from important marketing organizations state that in countries of large consumption, notably in France and Germany, increases have averaged well above this figure while the countries in which only slight advances have taken place are mainly those whose total requirements are relatively small.

The accompanying tabulation, based on such trade reports, gives for varying periods the proportional changes which have occurred since the beginning of the year in the distribution of three principal products—motor spirit, kerosene and gas and fuel oils.

As this compilation shows the growth in demand for fuel oil has been even more noteworthy than in the case of motor spirit. This presumably is a reflection of expanding industrial activity as well as of the growing importance of fuel oil in the fields of power supply and transportation.

So far as Europe is concerned consumption of kerosene has not increased at the same rate as has that of motor spirit and fuel oils. In certain countries there has been an actual falling off in the demand for kerosene. The heavy decrease in Belgium is attributed to the spread of electrification in that country.

Sales of lubricants have increased greatly in the past six months, the growth in the United States being 30 percent as compared with the first half of 1933. In the principal European countries gains of 10 to 30 percent have been recorded.

Since 88 percent of the world's automotive units are located in the United States and Europe changes in consumption in these two areas are of primary importance as affecting market demand for motor spirit, lubricants and fuel oil. In other parts of the world, however, a like increase in demand for these products has taken place and in some countries, South Africa for example, consumption has risen in even greater degree.

While the rise in demand for petroleum products that has taken place within the past six months has not altered the fundamental problems facing the petroleum industry its importance may be realized by consideration of the fact that if maintained during the remainder of the year the enlargement in demand will be sufficient to provide an outlet for the entire crude production of Roumania, Persia or any of the crude oil producing countries except the three leaders. The question of handling the forthcoming supply of oil from Iraq is one that has received much discussion but the entire output of Iraq will be much less than the increase in consumption which has taken place during the year.

Comparative Demand for Petroleum Products

Increase or Decrease percent 1934 over 1933

	Motor Fuel	Kerosene	Gas & Fuel Oils
France (Jan.-May)	10.68	0.55	36.29
Germany "	24.61	− 0.03	33.96
Belgium "	14.79	−11.07	8.47
Holland "	8.26	2.56	14.96
Baltic States (Jan.-Apr.)	38.13	− 4.18	2.20
Norway (Jan.-May)	6.68	− 3.31	2.28
Sweden "	10.75	15.98	16.61
Denmark "	14.35	6.10	4.07
Finland "	12.60	15.50	39.93
Switzerland "	19.43	− 0.52	9.72
Hungary "	2.09	3.68	19.64
Italy & Tripoli (Jan.-Mar.)	3.02	5.31	24.08
Portugal (Jan.-Apr.)	13.78	5.48	14.75
Greece "	5.15	9.24	15.15
Roumania (Jan.-May)	6.80	6.53	3.64
United Kingdom "	8.80	3.80	12.80

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Redwood Medal Awarded to Dr. White

Summer Meeting of Petroleum Technologists in London Hears Interesting Papers, Attends Award to Dr. David White of U. S. Geological Survey at Sixteenth Annual Dinner.

SUMMER meeting of the Institution of Petroleum Technologists was held toward the end of June at the Royal Society of Arts in London. After the presentation of a number of most interesting papers by members of the Institute dealing with various phases of petroleum technology the Redwood medal was awarded to Dr. David White of the United States Geological Survey. Due to Dr. White's delicate health, the award was received by Mr. Herschel Johnson of the United States Embassy in London who read a message from Dr. White and thanked the Institute in his name.

The sixteenth annual dinner of the Institution of Petroleum Technologists was held at the Park Lane Hotel on June 29th and terminated the mid-summer meeting.

The Redwood Award was instituted in 1923 in memory of Sir Boverton Redwood, distinguished petroleum technologist and founder of the Institution of Petroleum Technologists.

Dr. David White entered the U. S. Geological Survey in 1886, and served as Chief Geologist from 1912 to 1922, through the difficult period of the war when the services of every able geologist were concentrated night and day on increasing the known petroleum reserves in the United States. Dr. White is still connected with the U.S. Geological Survey after 48 years of distinguished service.

Mr. Johnson of the U.S. Embassy in London, in accepting the Redwood medal in Dr. White's unavoidable absence, spoke of the splendid work that such gatherings of scientists were doing for international harmony; expressed for Dr. White the keen regret he felt at his absence from this meeting of the Institute, and read a message from Dr. White expressing his deep appreciation of the honor done him by that body of scientists.

Mr. Thomas Dewhurst, President of the Institution of Petroleum Technologists, presided at the meeting.

Most of the other papers read at this meeting were reviews of special fields of petroleum technology, summarizing the outstanding recent developments and emphasizing present trends. Extracts of these papers are presented herewith.

Drilling

A REVIEW of developments and progress in drilling was given by J. B. Ellis. The catalog of recent improvements in this field is long, and is eloquent of the ingenuity and resourcefulness of the oil drillers who must recognize and cope with unseen difficulties in a narrow hole a mile or more deep. Much new experience is now available for meeting conditions created by formation pressures, the carrying out of pressure drilling under diverse and difficult conditions, the drilling of vertical holes and the correlative problem of drilling oblique holes in desired directions, off-shore drilling, etc.

Cracking in 1933

AS SET forth by Gustav Egloff and Badona L. Levinson the cracking art in 1933 advanced in many directions. This advance has had two main characteristics: on the one hand more careful fundamental research into basic factors, and on the other hand a tendency to evaluate cracked products according to quality rather than quantity. The result is a steadily increasing ratio of cracked to straight-run gasoline. The modern refinery now tends to center about the cracking unit as its most vital part. One of the main reasons for this predominance of the cracking department is that it allows of maximum production of gasoline and the minimum of less valuable subsidiary products; i.e., it permits extraction of maximum value from a given quantity of crude oil.

Chemical and Physical Refining

ALTHOUGH the classical method of purifying petroleum products with sulphuric acid will probably be with us for a long time, C. G. Verver and R. N. J. Saal show that much has been done or attempted to avoid its manifest disadvantages by employing other processes. But notwithstanding the proposed use of dozens of other chemical reagents for purifying oil products, sulphuric acid still retains its place in the treatment of kerosenes and white spirit, and in many cases it still remains the only suitable reagent for reducing high sulphur content; some of the newer reagents seem to have places in the treatment of cracked spirit. In this field there are nearly as many problems as there are different kinds of crudes; the number of new reagents are already legion, and the authors find it necessary to notice 75 important papers that appeared in 1933. The new literature on physical refining (extraction, dewaxing, absorption) is equally extensive. The most interesting of these is of course the use of selective solvents; there are now seven of these solvents that have definitely come into technical use: nitrobenzene, sulphur dioxide plus benzene, phenol, dichloro ethyl ether, furfural, cresol-propane, and croton aldehyde.

Motor Spirits and Light Distillates

ALTHOUGH gasoline is still available in any desired quantity and is still the cheapest and most efficient fuel for automobiles, efforts to displace or depress its use are not lacking. Most notable is the tendency of legislation in many countries to compel blending of alcohol with gasoline as a means of raising the price of agricultural products. In addition, energetic efforts are being made to find substitutes for gasoline in products derived from shale, coal, coal gas, and even coal dust and producer gas formed in portable generators. Perhaps the most serious present threat to the position of gasoline as a motor fuel is the rise of the Diesel engine, which can make use of products now regarded as little better than waste materials. Current petroleum literature, however, continues to be crowded with reports on investigations of the factors of anti-knock value, gum formation, volatility, etc. Gasoline may eventually lose its dominating position, but as reviewed by E. B. Evans, a vast work of making it a better fuel is going on.

Transportation and Storage

THE LITERATURE on transportation and storage published in 1933, as reviewed by A. C. Hartley, is notable more for showing steady improvements in materials and methods of construction rather than for outstanding developments. Electrically welded pipes have almost entirely superseded lap welded, pipelines of larger diameter to work at higher pressure are being built, and in these lines welded joints may be said to have completely displaced threaded joints. The use of the "Rannett" pump, introduced in 1932 and which has involved remarkable changes in pumping station design, has now been much extended. Diesel-operated centrifugal pumps for main line pumping stations are used on an increasing scale. A considerable amount of submarine pipeline, involving a special technique, has been laid. The old problem of preventing corrosion of pipelines has received much attention, with no definite solution in sight, other than careful coating.

Production Technique

A. L. SATCHELL and S. H. Chapman contributed a review of the technique of production in the oil fields, necessitated by immense production and the need for reducing costs. Although no outstanding inventions were recorded in 1933 there have been numerous improvements in conventional pumping equipment, such as pumping off the beam of standard rigs, special pumping units, pumping powers, the metallurgy of sucker rods and working barrels and pumps. A striking new design in prime movers is the "Rotator" pump.

Progress in Roumania

AS SHOWN by Gwyn Elias, 1933 has produced a number of improvements in field technology in the Roumanian oil districts. Rotary drilling has practically supplanted all other methods. Rates of drilling have greatly increased, and records of 1,000 ft. or more in 24 hours have been made. (The Roumanians have good reason for availing themselves of every technological advantage, because their oil industry carries what is perhaps a heavier taxation and freight charge than that of any other country competing in the world oil market.)

Volume or Weight?

IN A PAPER entitled "On the advantages to be secured by expressing quantities of liquid petroleum products in terms of volume or capacity rather than of weight" J. McConnell Sanders summarizes the argument in favor of volume units, chief among which is that oil is always measured in the first place before its weight can be calculated, and it seems logical to use an original figure rather than a derived one. He therefore recommends the cubic meter at 20 deg. C. as the universal basis of measurement.

Oil and Coal

HOW A BRITISH oil man regards the relation between the oil industry and the coal industry was set forth by C. Dalley. The point of view taken is that it is an economic mistake to try to save the coal industry by shackling the oil industry with heavy taxes to compensate unemployment in the coal industry. The recent attempt of the British government to compel the use of more coal by taxing the use of fuel oil has had the result of decreasing the use of oil without increasing the consumption of coal, and the net result has been a crippling of certain export trades with concomitant increase in unemployment.

World Oil Production—Official Figures for 1934 Revised

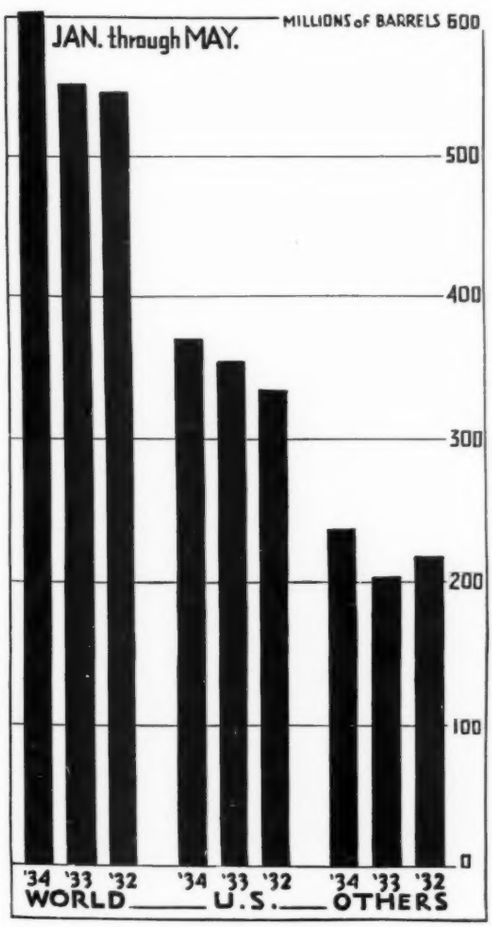
All figures furnished direct to WORLD PETROLEUM by Governments, except where otherwise specified

(Figures in U. S. Barrels—Conversion ratio 7 bbl.=1 ton)

Country	June 1933	July 1933	August 1933	September 1933	October 1933	November 1933	December 1933	January 1934	February 1934	March 1934	April 1934	May 1934
United States	82,841,000	84,387,000	85,239,000	78,186,000	76,017,000	69,755,000	72,060,000	71,976,000	65,450,000	75,548,000	75,796,000	79,870,000
Russia	12,489,400	11,837,000	13,402,200	14,340,200	14,595,000	13,479,200	12,591,600	13,356,000	12,488,900	14,644,000	14,081,900	14,315,000
Venezuela	9,354,387	10,197,425	10,367,511	10,231,410	10,852,653	10,843,910	11,253,704	11,091,514	9,921,765	11,238,717	11,185,076	11,768,799
Roumania	4,490,220	4,755,600	4,562,551	4,420,486	4,502,127	4,000,000	4,515,000	4,906,000	4,440,000	5,066,000	4,981,000	5,258,000
Persia[2]	4,452,000	4,648,000	4,669,000	4,109,000	4,549,867	4,199,797	4,422,096	4,164,790	3,988,502	4,483,535	4,284,231	4,648,105
Mexico	2,805,353	2,950,803	2,893,211	2,605,840	2,429,072	2,833,630	3,259,258	3,113,707	3,863,088	3,183,923	3,206,490	2,714,828
Netherland India	3,280,382	3,249,428	3,172,568	3,186,435	3,179,043	3,127,047	3,414,754	3,376,674	3,185,091	3,631,726	3,489,024	3,609,816
Colombia[1]	1,113,328	1,189,655	1,164,104	1,085,885	1,087,397	999,253	995,605	1,012,780	903,471	1,017,147	1,193,736	1,730,095
Argentina	1,181,500	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]	1,180,000[1]
Peru[1]	1,750,206	1,183,527	1,284,726	1,035,338	970,427	998,066	1,178,004	1,188,540	1,041,658	1,086,827	1,037,127	1,085,192
Trinidad	772,626	759,076	780,929	755,676	818,184	788,970	799,484	852,189	766,254	876,544	876,950	926,785
British India	741,293	799,788	754,675	773,440	680,880	667,719	701,478	782,743	699,369	808,647	700,000[1]	700,000[1]
Poland	326,830	336,553	332,934	315,000	312,956	309,624	311,500	213,333	281,946	310,800	304,500	305,592
Sarawak	184,250	196,756	194,327	182,602	186,431	179,648	176,008	172,172	158,361	176,568	166,999	164,500[1]
Japan and Taiwan[3]	195,000	195,000	195,000	195,000	195,000	195,000	195,000	195,000	195,000	195,000	195,000	195,000
Egypt	137,620	136,752	143,836	133,903	125,786	128,450	127,421	122,934	109,900[1]	121,121	117,236	131,950[1]
Ecuador	141,640	147,889	148,467	139,826	141,379	133,591	138,198	132,655	120,900	131,566	135,226	142,869
Canada	113,447	99,510	100,602	97,342	97,132	108,304	113,677	124,425	116,546	130,046	118,890	117,693
Germany[3]	130,200	141,414	153,174	155,778	160,951	157,808	155,491	152,292	138,593	159,096	176,071	159,103
Iraq[1]	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
France[1]	46,000	46,000	46,000	46,000	46,000	46,000	46,000	46,000	46,000	46,000	46,000	46,000
Others[1]	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000
Total	126,682,682	128,573,176	130,920,815	123,311,161	122,263,285	114,267,017	117,770,278	118,394,748	108,231,344	124,171,263	123,407,456	129,205,327

[1] Estimate. [2] Anglo-Persian Oil Co. figures revised; fuel oil returned to the ground has been deducted. [3] Thuringia estimated 7,000 bbl.; official figure for Prussia. Sakhalin Russian included with Russia. Sakhalin Japanese included with Japan. [4] International Petroleum Company's figures.

Comparison of crude oil production in the United States, all other countries and total for the world during January through May, 1932, 1933 and 1934.



Official Crude Oil Production Figures for 1932, 1933 and First 5 months of 1934

(Barrels of 42 U. S. Gals.)

	Total 1932	Daily Average 1932	Total 1933	Daily Average 1933	Total 1934	Daily Average 1934
United States	785,159,000	2,145,243	898,874,000	2,462,670	368,640,000	2,457,600
Russia	149,719,000	409,070	148,901,900	407,950	68,885,800	459,243
Venezuela	119,596,512	326,766	120,882,802	331,186	55,205,871	368,039
Roumania	50,491,205	137,954	50,971,200	139,647	24,651,000	164,340
Persia	45,122,455	123,285	49,581,280	135,840	21,569,163	143,795
Mexico	32,802,285	89,624	33,904,882	92,890	15,082,036	100,547
Netherland India	39,584,027	108,153	38,512,663	105,516	17,292,331	115,282
Colombia	16,384,956	44,768	13,157,127	36,047	5,857,229	39,048
Argentina	13,166,900	35,975	13,954,800	38,232	5,900,000	39,333
Peru	9,899,266	26,026	13,923,281	38,146	5,439,344	36,262
Trinidad	10,023,780	27,387	9,560,039	26,192	4,298,722	28,658
British India	8,600,312	23,500	8,721,665	23,893	3,690,759	24,605
Poland	3,905,230	10,670	3,858,085	10,570	1,416,171	9,441
Sarawak	2,274,043	6,213	2,289,472	6,273	838,600	5,590
Japan and Taiwan	2,340,000	6,393	2,340,000	6,411	975,000	6,500
Egypt	1,742,370	4,760	1,591,495	4,360	603,141	4,021
Ecuador	1,573,857	4,300	1,622,624	4,446	663,216	4,421
Canada	1,054,373	2,880	1,147,825	3,144	607,600	4,051
Germany	1,824,019	4,983	1,712,823	4,692	785,155	5,234
Iraq	1,200,000	3,300	1,200,000	3,288	500,000	3,333
France	552,000	1,508	552,000	1,515	230,000	1,533
Others	432,000	1,180	432,000	1,184	180,000	1,200
Total	1,297,477,590	3,544,940	1,417,470,029	3,884,022	603,311,138	4,022,076

Foreign Oil Legion

V. CAMBI, resident manager at the Fornoro Taro oil fields and refinery of the Societa Petrolefera Italiana, has been visiting the Roumanian oil fields studying certain phases of rotary drilling. Hitherto, all drilling on this company's properties has been by cable, and its first rotary outfit recently arrived from the United States. Tests are being made with deep drilling, and indications are that a new horizon may be opened up.

V. Cambi

M. R. BRIDGEMAN of the London staff of Anglo-Persian Oil Company, Ltd., is acting as that company's representative in New York during the absence of B. R. Jackson. The latter is shortly leaving England on a visit to Australia in company with Sir John Cadman, chairman of Anglo-Persian and Iraq Petroleum companies.

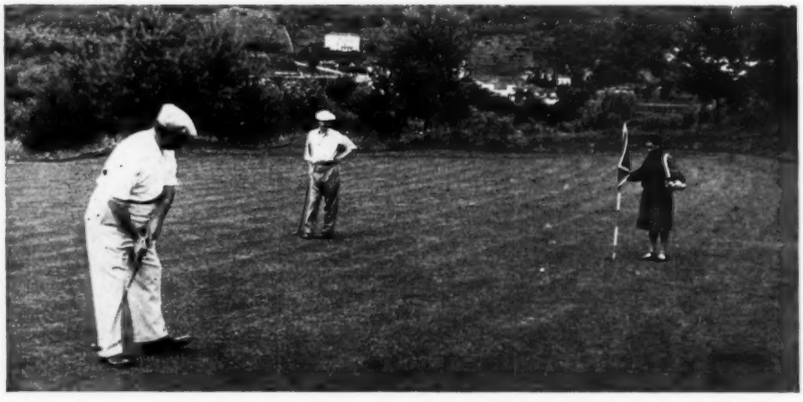
JUDGE AMOS L. BEATY, chairman of the Planning and Coordination Committee representing the petroleum industry of the United States in Washington is on a two months' vacation trip in Europe.

WILLIAM J. KEMNITZER, petroleum technologist, and co-author of PETROLEUM IN THE UNITED STATES, has begun preparation of a new book, ECONOMICS OF PETROLEUM.

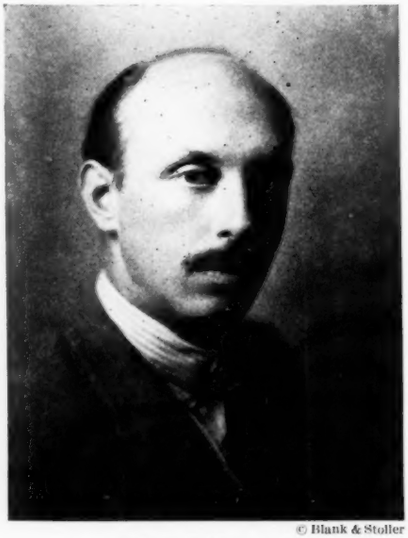
▼

THE first shipment of Iraq oil flowed through the great Iraq Petroleum Company's pipeline from Kirkuk to Tripoli, in Syria on July 14 and by evening of the 15th the reservoirs at Tripoli were filled. It is understood that the Compagnie Francaise des Petroles will send a tanker to Tripoli to convey the first shipment from the Mediterranean to France. The first Iraq oil will reach Haifa, Palestine, through the pipeline before the end of this year.

EVEN when busy oil company executives go on an inspection tour of European properties a bit of relaxation may be interspersed now and then with their more arduous labors. John A. Brown (left) and Harold F. Sheets (right) of Socony-Vacuum are shown surveying petroleum possibilities at Villa d'Este, Lake Como, Italy, in late June.



John A. Brown and Harold F. Sheets in Italy



© Blank & Stoller

M. R. Bridgeman

J. C. AXELSON, president of the Axelson Manufacturing Company, California, returned to the United States on the 14th after having visited London, The Hague, and Roumania.

B. P. NEWTON, vice-president and European director of the Gulf Refining Company sailed from New York to Brussels early in July.

A. F. DABELL, general manager in Trinidad of Trinidad Petroleum Development Company, a British controlled oil fields subsidiary, is in England on vacation.

H. P. MANTON, assistant field manager of Compania Petrolera Lobitos, is in England on leave.

▼

View of the terminal site near Tripoli, Syria.

UNITED STATES

	Daily Crude Oil Production Bbl.	Daily Runs to Stills Bbl.	Total Motor Fuel Stocks Bbl.	Imports for week Bbl.	California Shipment East for week Bbl.
Week Ending June 23	2,676,500 579,500*	2,580,000	63,011,000	1,221,000	695,000
Week Ending June 30	2,662,500 584,000*	2,495,000	62,320,000	1,310,000	499,000
Week Ending July 7	2,645,000 577,000*	2,500,000	61,419,000	932,000	148,000
Week Ending July 14	2,668,000 540,500*	2,565,000	60,677,000	1,086,000	310,000

Underlined figures indicate improvement in statistical position—decrease in production, runs to stills, gasoline stocks and imports.
* Estimated total production of the Rusk-Gregg field, East Texas; official and unreported.

Federal Control Tightening

WITH THE defeat of the Thomas-Disney Oil Control Bill in the House Interstate and Foreign Committee on June 14, Secretary Ickes, as Petroleum Administrator, directed the efforts of the Federal Control Agencies towards effective enforcement of the Oil Code under existing legislation. In accordance with that policy Secretary Ickes made an agreement for unification of the investigation and enforcement facilities of the Departments of Interior and Justice. The resources of the two federal departments, under the new arrangement, are to be particularly directed against operators refusing to abide by marketing provisions of the oil code.

The Congressional sub-committee of the House Committee on Interstate and Foreign Commerce, appointed for a detailed investigation of all phases of the oil industry, arrived in the Mid-Continent area in July. The sub-committee is to present a report and its recommendations to Congress, when it reconvenes, for further consideration of the Oil Control Bill killed in June. The sub-committee, consisting of representatives entirely unfamiliar with the oil industry, will be able to get at but few fundamental factors, listening at many hearings to various factions.

Texas Cartel in Operation

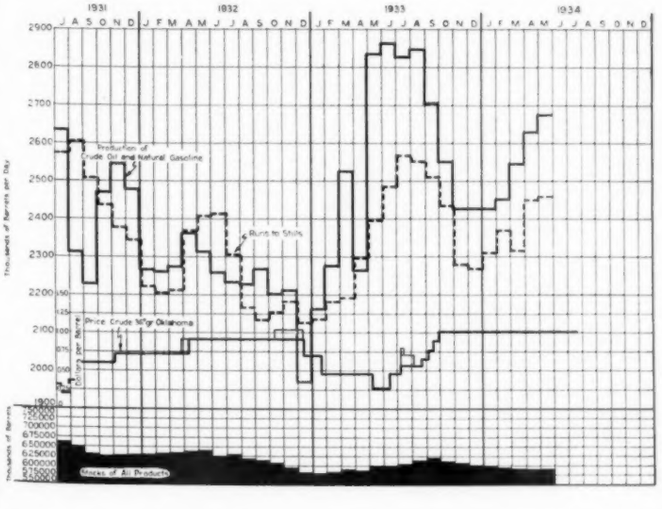
A GREAT step forward was made on July 6 when the National Refinery Coordinator for the Planning and Coordination Committee, Howard Bennette, succeeded in obtaining signatures of 87 percent of the independent refiners in the East Texas field, thus putting in operation the cartel plan formerly agreed upon by the major refining companies, Secretary Ickes, and the Department of Justice. In effect, 24 major companies agreed to purchase all distress gasoline produced by small refineries in East Texas area, provided such gasoline has been refined from legally produced crude oil. In return independent refiners, signatories to supply and purchase contracts, agreed (1) not to produce, purchase, transport, or run through their plants any crude oil produced in excess of the federal and state quotas assigned to properties from which the crude has been derived; (2) not to produce more gasoline than the current allowable fixed from time to time by the Planning and Coordination Committee; and (3) to submit such reports of operations as may be requested by the Petroleum Administrator or the Planning and Coordination Committee.

The immediate plans of the major purchasers are to take off the market between 350,000 bbl. and 475,000 bbl. of gasoline at 3½ cents per gallon for U.S.M. grade and at 3⅝ cents per gallon for 400 end point gasoline.

It is estimated that the new agreement will reduce refinery runs in the East Texas field by about 62 percent, or from 60,000 bbl. to 22,800 bbl. per day, thus eliminating some 15,000 bbl. of gasoline per day from the markets. If such reduction is achieved and sustained a very considerable improvement may be reflected in the motor fuel prices, and crude oil prices will be maintained at present levels.

Miriam A. Ferguson, Governor of Texas, announced on July 5 through the administration spokesman, J. E. Ferguson, that a special session of the Texas legislature will be called September 10 to enact further oil control legislation. Mr. Ferguson blamed J. V. Allred, Attorney General, and Lon A. Smith, Chairman of the Railroad Commission, for the overproduction of some 100,000 bbl. per day in the East Texas field, stating, however, that the Railroad Commission was already burdened with "more work than it can ever hope to do." The anticipated new legislation is expected to

U. S. production, runs to stills and price of crude oil in relation to stocks of all petroleum products.


1931
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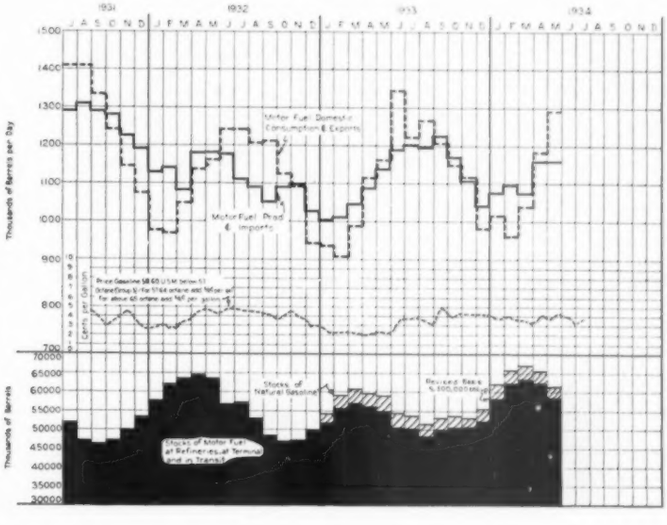
J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
Production of Crude Oil and Natural Gasoline
Runs to Stills
Price Crude 36° Gr. Oklahoma
Stocks of All Products

U. S. consumption and exports, production, imports and prices of motor fuel in relation to motor fuel stocks.


1931
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Motor Fuel Domestic Consumption & Exports
Motor Fuel Prod. & Imports
Stocks of Natural Gasoline
Revised Basis
Stocks of Motor Fuel at Refineries, at Terminals and in Transit

include provisions for a separate Oil and Gas Commission, possibly an effective solution, especially considering the vastness of Texas and its many oil fields, pipelines and refineries.

The Texas Railroad Commission showed a better spirit of cooperation with the federal administration when it ordered July allowables reduced to 1,006,000 bbl. per day, as compared with 1,042,100 bbl. under federal quota, apparently allowing a margin of 36,100 bbl. for overproduction. The East Texas field July allowable was reduced to 457,958 bbl. per day, as compared with 509,081 bbl. in June, a cut of 51,123 bbl. The July nominations of crude oil purchasing companies, submitted in Austin to the Railroad Commission, were 1,147,666 bbl. per day, or 141,666 bbl. in excess of actually allowed production.

California Marketing Plan

THE PACIFIC Coast Petroleum Agency agreement became officially effective when, on June 30, the federal government filed in federal court in San Francisco its approval of the marketing plan and its agreement to modify the 1930 injunction, which prohibited the purchase of surplus gasoline by the major concerns from smaller companies.

The agency was immediately put in operation, purchasing surplus gasoline from refiners who could not dispose of it in regular marketing channels, provided such gasoline was manufactured from crude oil produced within proration allowables, and provided the refinery itself produced gasoline within a quota assigned to it by the Petroleum Administrator, or his agents.

The Pacific Coast Petroleum Agency agreement was directly responsible for the greatly improved prices and the vastly improved economic position of the oil industry of California. Between June 20 and 26 the Standard Oil Company of California advanced tank wagon–service station prices of motor fuel throughout its territory 3½ cents per gallon, to 15.5, 17.5, and 19.5 cents per gallon for the three respective grades, while an additional advance of 1 or 1½ cents a gallon is confidently anticipated in the near future.

Labor Situation Uncertain

THE LABOR situation in the oil industry continued to be affected by intangible ties of general labor unrest in the country. Thus while during May, with the settlement of labor problems achieved without serious strikes or troubles in steel and automobile industries, the labor situation in oil fields and refineries appeared quiet. In June, however, came the serious disturbances on the Pacific Coast, where the longshoreman strike developed into riots and troops were called. Local strikes and lockouts developed in the textile industry, and elsewhere in the country smaller strikes and disorders occurred, and simultaneously the workers in the oil industry showed unrest.

The Champlin Refining Company's refinery at Enid, Oklahoma, one of the largest in the state, was shut down, first by the strike of its employees, and subsequently by a lockout. H. H. Champlin, president of the company, signed an agreement early in June to pay NRA wage differentials and to abide by the oil code, but the union employees asserted the agreement was broken when the company refused to reinstate discharged union men, and refused to pay "back pay" from September 2, 1933, due under Secretary Ickes order. The management raised a vital issue, refusing to re-employ "unfaithful" workers who "destroyed property and forcibly restrained executives from entering refinery." The Federal Labor Board backed the unions. In the meanwhile, H. H. Champlin stated that it was more profitable for the company, under present economic conditions in the oil industry, to purchase gasoline from other refiners for the Champlin Refining Company's filling stations and refused to open the refinery on the conditions set by the union. On July 6, however, the International Association of Oil Field, Gas Well and Refinery Workers, with the approving vote of company employees, voted a sympathetic strike on Champlin Refining Company's oil producing properties in Greater Seminole and Oklahoma City fields, and at the same time members of the association began picketing the company's service stations in Kansas and Oklahoma. On July 12, the Champlin Refining Company's refinery strike was ended. David Moscovitz, attorney for the Petroleum Labor Policy Board, negotiated the agreement between the company officials and the union committeemen. The refinery was scheduled to be opened at once.

In the East Texas field some 500 rig builders, about 95 percent of the total, walked out on July 6 demanding a wage increase of $2 per day, to $12 for rig builders and to $14 for crew foremen. Similar demands were granted by contractors in Houston area on June 20. The rig builders in East Texas field returned to work July 12 pending arbitration.

Also, on July 6 the employees of the Indian Territory Illuminating Oil Company (Empire) and of Schoenfield-Hunter, Inc., in the Oklahoma City and Greater Seminole fields, voted to strike unless immediate agreement is reached on wages and labor conditions, the workers demanding a wage increase of around 25 percent. The strike would affect around 1,250 men. Negotiations between the employees and the Indian Territory Illuminating Oil Company were opened two months ago, but lately were discontinued without an agreement.

The wage differential order of the Petroleum Administrator, Secretary Ickes, issued May 21, 1934, and retroactive to September 2, 1933, the date the Petroleum Code became effective, was attacked on most reasonable grounds by the Mid-Continent Oil & Gas Association at a special meeting held June 29, probably presaging its partial revocation, as it has been already responsible for considerable difficulties and troubles, as in the case of the Champlin Refining Company. The resolution of the Mid-Continent Oil and Gas Association follows in part:

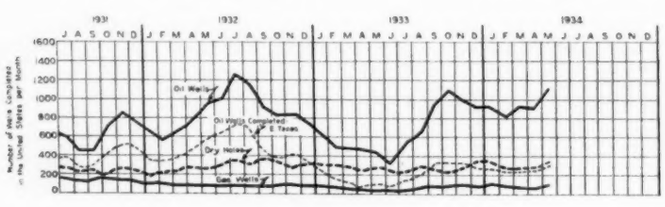
> RESOLVED, that the board of directors of the Mid-Continent Oil & Gas Association protests the wage differential order of the Petroleum Administrator issued on May 21, 1934, for the fundamental and primary reasons as follows: First, that the retroactive features of the order are invalid and unconstitutional. Second, that the wage differential order was not made in compliance with the authority vested in the petroleum administrator under the code of fair competition for the petroleum industry. Third, that the wage increases and differentials prescribed by said order are not justified by present economic conditions and the general situation of the petroleum industry itself. Resolved further, that the board of directors of the Mid-Continent Oil & Gas Association respectfully requests that the wage differential order of the petroleum administrator be revoked or suspended and that the board requests a formal hearing or conference to be held on this matter by the petroleum administrator himself at the earliest possible date.

On the whole the Federal Labor policy as sponsored by the Federal Petroleum Labor Board and Secretary Ickes has been dangerously liberal. The labor associations, feeling the government behind them, are gradually increasing their demands, and unless the government alters its policies extensive strikes are threatened in the oil industry.

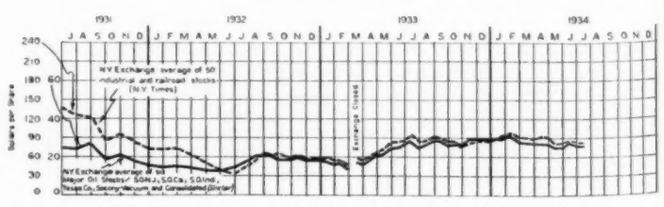
Crude Oil Exports High

DURING May, 1934, total imports of all petroleum products into the United States increased slightly to 4,456,000 bbl., 143,800 bbl. per day, as compared with 4,103,000 bbl., 136,800 bbl. per day, imported during the preceding month. Under the federal quota the imports are limited to 108,400 bbl. per day; therefore during May, 1934, the quota was exceeded by 35,400 bbl. per day; and over the September, 1933–April, 1934 period, inclusive, the imports averaged 120,300 bbl. per

U. S. drilling; comparison of oil wells, dry holes, and gas wells.



Six major oil stocks in relation to 50 industrial stocks on the New York Stock Exchange.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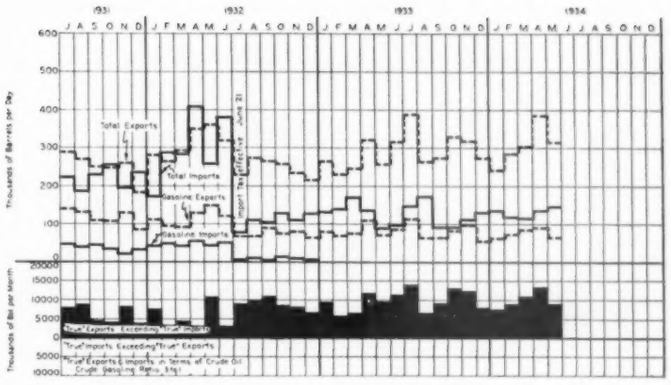
N.Y. Exchange average of 50 industrial and railroad stocks (N.Y. Times)
Exchanges Closed

day, therefore exceeding the quota by 11,900 bbl. per day and by 3,250,000 bbl. over the whole restricted period.

Exports of all petroleum products, including motor fuel, in May, 1934, declined sharply to 9,639,000 bbl., 310,000 bbl. per day, approximately the average volume during the last fourteen months, as compared with the near record figure of 11,617,000 bbl., 387,000 bbl. per day, exported in April, 1934, and were 17.88 percent above total exports in May of 1933, thus continuing to reflect the advantages of the lower dollar exchange. Motor fuel exports during May, 1934, amounted to 1,907,000 bbl. as compared with 2,723,000 bbl. exported in April, 1934, a decline of 30.0 percent; and also 10.0 percent below motor fuel exports in May of 1933. Exports of crude oil from the United States remained unchanged during May, 1934, 3,724,000 bbl. having been shipped, as compared with 3,942,000 bbl. exported in the preceding month; and 2,678,000 bbl. exported in May of 1933. Therefore in May, 1934, the crude oil constituted 38.7 percent of the total exports of all petroleum products.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Thousands of Barrels per Day
Total Exports
Total Imports
Gasoline Exports
Gasoline Imports
Import Tax Effective June 21
Thousands of Bbl per Month
"True" Exports Exceeding "True" Imports
"True" Imports Exceeding "True" Exports
"True" Exports & Imports in Terms of Crude Oil
Crude Gasoline Ratio, 3 to 1

Total U. S. imports and exports and gasoline imports and exports in relation to true exports exceeding true imports.

Overproduction Continues

CRUDE OIL and natural gasoline production during June, 1934, averaged about 2,770,000 bbl. per day, 94,000 bbl. per day above the preceding month when the average production was 2,676,000 bbl. per day; but 85,000 bbl. per day below the crude oil and natural gasoline production in June of 1933, when the East Texas field was out of control and producing around 1,000,000 bbl. per day. However, the estimated June, 1934, crude oil production of 2,670,000 bbl. per day continued to exceed the federal allowable by some 142,000 bbl. per day, and early in July the overproduction continued at a rate above 100,000 bbl. per day. East Texas continued as the principal source of overproduction, followed by Oklahoma, while California and Kansas produced within the federal allowable.

Total stocks of all oils decreased by 2,082,000 bbl. during May, 1934, to a total of 587,713,000 bbl., indicating a daily gross decline of 67,100 bbl.

The crude oil runs to stills during the past month averaged around 2,540,000 bbl. per day, or at a rate too great for a sufficiently large reduction in stocks at the height of the motoring season.

Consumption At All-Time Peak

INDICATED domestic demand for motor fuel during May, 1934, averaged 1,230,000 bbl. per day, an all time May record, an increase of 12.74 percent above the daily average during April, 1934, when 1,091,000 bbl. per day were consumed; 133,000 bbl. per day above the domestic motor fuel consumption in May of 1933, an increase of 12.13 percent; 184,000 bbl. per day above the domestic motor fuel consumption in May of 1932, an increase of 17.60 percent; and, of very great significance, 42,000 bbl. per day above the domestic motor fuel consumption in May of 1931, the peak year, an increase of 3.54 percent. The fast recovery of the domestic motor fuel consumption to the record volume is a most encouraging factor in the oil industry of the United States at this time and may to a great extent counteract the current overproduction of crude oil, more particularly because there were no new large fields discovered in the United States since the opening of the Conroe pool early in 1932, while at the same time some of the older major pools recorded very rapid declines in potentials even though producing under strict proration. The NEW YORK TIMES weekly combined business index dropped off sharply during the past month standing around 85.0; as compared with a brief peak of 99.0 in July of 1933; in July of 1932 the index stood at 65.0 and in July of 1931 at 87.0. The current business activity would probably be considerably higher if the labor situation had not suddenly taken a turn for the worst early in July.

The daily rate of exports of motor fuel averaged 62,000 bbl. in May, 1934, 31.8 percent below the exports in the preceding month; 10.2 percent under the motor fuel exports in May of 1933; 58.4 percent under the exports in May of 1932; and 60.6 percent under the exports in May of 1931.

Total daily demand for motor fuel in May, 1934, therefore was 1,292,000 bbl., an increase of 10.8 percent as compared with the total daily demand in May of 1933; 8.2 percent above total demand in May of 1932; but still 3.9 percent under total demand of May of 1931, the year in which motor fuel demand was at its peak.

On June 1, 1934, motor fuel stocks at refineries, plants, terminals and in transit amounted to 61,628,000 bbl., a decrease of 3,980,000 bbl. as compared with stocks on hand on May 1, 1934, indicating that during May motor fuel demand exceeded supply by 128,400 bbl. per day, the earliest seasonal major reduction in motor fuel stocks on record.

Prices Firmer

DURING late June and first half of July crude oil prices throughout United States were maintained, while refinery gasoline quotations regained most of the ground lost early in June. In retail marketing the "price wars" were definitely being eliminated, some by federal intervention and arbitration.

Tank wagon/service station prices regular grade and including all taxes, in representative districts in the middle of July were: 16.5/17.5 cents in metropolitan New York (18.3/17.8 cents in Newark, N. J.); 16.0/17.0 cents in Boston, Mass.; 11.5/13.5 cents in Providence, R. I.; 15.5/17.5 cents in Chicago; 17.5/19.5 cents in Ohio; 17.5/19.5 and 15.5/17.5 cents in San Francisco and Los Angeles respectively; 16.0/18.0 cents in Oklahoma; 15.0/17.0 cents in St. Louis; and 24.0/27.0 cents in Montreal, Canada, with a 2-cent differential for the premium grade.

Refinery gasoline quotations in the Mid-Continent districts improved during the past month, with much more steadiness apparent in the East Texas area, the most troublesome spot, due directly to the operation of the recently adopted supply and purchase "cartel" plan. Refinery gasoline was quoted on July 20 at 4–4⅛ cents per gallon for 58–60 U.S.M. grade, 59.9 and below octane rating in Group 3, Oklahoma market; 60 to 64.9 octane rating, U.S.M., brought 4⅝–4⅞ cents per gallon; and 65 and above octane rating, U.S.M., commanded 4⅞–5⅛ cents per gallon; in East Texas district the third grade gasoline improved from 3 to 4 cents a gallon. On the

Effect of Federal Proration Orders in Principal Oil Producing States

(in barrels)

	Sept. 1933 to June 1934 Cumulative Over-production	June 1934 Over-production	July 1934 Federal Daily Quota	Daily Average Production for Week Ending July 7	Daily Average Production for Week Ending July 14	August 1934 Federal Daily Quota
Texas	16,552,000	2,880,000	1,042,100	1,140,500	1,101,000	1,001,300
Oklahoma	4,971,000	690,000	489,500	500,500	551,000	480,100
California	4,490,000	190,000	509,400	512,000	528,500	480,200
Kansas	628,000	140,000*	134,500	130,500	135,500	131,200
United States	27,917,000	3,400,000	2,530,300	2,645,000	2,668,000	2,449,300

* Kansas underproduced 140,000 bbl. during June.

East Coast, at Bayonne, U.S.M. grade 60 to 64.9 octane rating was quoted unchanged at 6¼–6½ cents per gallon (3.76 cents gold*). Gulf Coast prices for export on July 15 were steady at 4¼–4⅜ cents per gallon (2.53 cents gold*) for 58–60 U.S.M. grade.

Natural gasoline prices experienced sharp declines during the past month and on July 15 grade 26–70 was quoted at 1⅜–1½ cents a gallon (0.885 cents gold*) in Oklahoma; at 1¼–1⅜ cents a gallon (0.736 cents gold*) in North Texas, and at 1¾–1⅞ cents a gallon (1.034 cents gold*) in North Louisiana; natural gasolines recovered, however, by July 20, being quoted at 2½–2⅜–2⅞ cents per gallon respectively.

Kerosene prices remained steady and unchanged during the past month and on July 15 grade 41–43 w.w. was quoted at 3⅛–3⅜ cents a gallon in Group 3, Oklahoma market; and at 5¼–5½ cents a gallon (3.17 cents gold*) on the East Coast at Bayonne. Gulf Coast prices for export declined slightly to 4–4¼ cents (2.48 cents gold*) for 41–43 p.w. grade.

East Texas

THE RUSK area, in Cherokee County of East Texas, was eliminated during June and early July as a promising territory for a large field, as was predicted in the preceding issue of WORLD PETROLEUM, and current development will attempt only to extend gradually the indicated very small pool.

T. J. Wood and R. M. Young No. 1 New Birmingham Development Company, in Levi Jordan survey, the discovery well, after developing salt water at a total depth of 5,125 ft., was plugged back, re-drilled, and with total depth of 5,107 ft. produced 1,100 bbl. of clean oil initially through ¾-inch choke, but rapidly declined to 380 bbl. of crude oil and 20 bbl. of salt water per day, while the tubing pressure declined to 150 lbs.

The recently discovered Cayuga field was further defined during the last month, thus adding a small area factor to the former disappointment of unusually thin oil saturated section of Woodbine sand, measuring but 30 ft. at best.

The Barnsdall Oil Company's No. 1 J. D. Loper, in James Wilson survey, on the southeast edge of the field and offsetting a producing well, Tide Water and Texas Seaboard Oil Companies' No. 1 E. L. Harton, tested salt water in the Woodbine sand from 4,065 to 4,086 ft.

Roeser and Pendleton, Inc. No. 1 Bowyer, in Everett Ritter survey, reported in the preceding issue of WORLD PETROLEUM as the possible western extensioner, on production test made only 6,000,000 cu. ft. of distillate saturated gas without oil; while the indicated appreciable thickening of lower formations westward, as marked in No. 1 Bowyer, apparently will preclude the possibility of the Cayuga field extending in that direction. At this time the new pool may be extended only in northern and southern directions, both ends being tested now by Tide Water and Texas Seaboard Oil Companies.

The drilling activity subsided considerably in the East Texas field during July, the Texas Railroad Commission finally adopting stricter rules for issuing new drilling permits, instead of the former free for all policy. New locations declined more than 50 percent, as compared with June activity, to around 40 per week, while completions dropped to around 60 per week.

Stanolind Oil and Gas Company (S. O. Indiana) further increased its holdings in the East Texas field by acquiring from the H. L. Hunt Production Company 111 acres with 18 wells, and from Devonian Oil Company 250 acres (½ interest only in 83 acres) with 25 wells, with combined daily allowable of around 1,600 bbl., for an estimated consideration of $1,650,000.

Texas Gulf Coast

HUMBLE OIL and Refining Company (S.O.N.J.), the sole owner of the Raccoon Bend field, vastily increased its reserves in that field when it proved for production the sands of Cockfield formation of Eocene age. The Raccoon Bend field was discovered in 1928 and until recent deeper sand discovery produced principally from the Gutoskey (Whitsett) sand at around 3,000 ft. and from the Grawunder (McElroy) sand at around 3,250 ft.; the field to-date covering about 1,150 acres, having 86 oil wells with current allowable of 4,350 bbl. per day and an accumulated production of around 12,600,000 bbl. The Raccoon Bend field is located 60 miles due northwest from Houston and 48 miles due southwest from the Conroe field, the largest Gulf Coastal pool, producing from the Cockfield formation only.

The Humble Oil and Refining Company completed three wells during the past month in the Cockfield formation, all on the east side of the Raccoon Bend field. Its No. 1 Zeiske, the discovery, did 392 bbl. per day initially from 4,016 to 4,047 ft.; its No. B-2 Rammert did 550 bbl. initially from 4,123 to 4,134 ft.; and its No. 13 Thompson did 840 bbl. initially from 4,112 ft.

Quintana Petroleum Corporation's No. 1 O'Conner, in Swisher survey, four miles due southeast from Greta field, opened a new field when it produced 550 bbl. of 39 gravity crude oil through ⅜-inch choke from 5,569 to 5,575 ft. Humble Oil and Refining Company is reported to own half interest in the well and in the large block surrounding the discovery; and will connect the new producer with its Refugio field pipeline system. The discovery well was located after a seismograph survey.

Oklahoma

THE Edmond field, in Oklahoma County, 12 miles due north from the Oklahoma City pool, assumed great importance during early July when two drilling wells there indicated a structure of major structural displacement. The Edmond field was discovered in September of 1930 when Mid-Kansas Oil and Gas Company completed its No. 1 Messer in section 32-T14N-R3W in the first Simpson sand at 6,665 ft. producing about 700 bbl. per day, but, in the interests of conservation, immediately shut the well in and did not re-open it until April 1, 1934, when the well started off with a production of 825 bbl. of 38 gravity crude oil per day and since settled down to around 250 bbl. per day. No. 1 Messer showed evidence of a truncated structure, having missed Hunton limestone and Sylvan shale and drilling into Viola limestone directly from the Cherokee shales of Pennsylvanian age. The opening of No. 1 Messer for production caused two offsets to be drilled. Mid-Kansas Oil and Gas Company's No. 1 Dahl in section 31-T14N-R3W, the west offset to the discovery (660 ft. due west), indicated that the structure is truncated far more than was anticipated drilling from Cherokee shales direct into Simpson section, thus having missed all of Hunton limestone, Sylvan shale and Viola limestone and the upper portion of the Simpson dolomitic series. No. 1 Dahl drilled into first Simpson sand at 6,385 ft., cored saturated sand and is currently waiting on cement to set with a total depth of 6,393 ft. No. 1 Dahl accordingly topped first Simpson sand 316 ft. structurally higher than the discovery well, No. 1 Messer, and should be completed as a very large well. While very prolific production is anticipated in the Edmond field it is not thought that the pool will exceed 1,500 acres in area, since it is already defined by three dry holes.

Four miles due east from the Lucien field Continental Oil Company's No. 1 Bennett in section 19-T20N-R1W was showing very poorly testing salt water and some oil in the first Simpson sand at 5,075 to 5,115 ft., but not eliminating a possibility of it being an edge well of a small field.

In northwestern Oklahoma Sinclair-Prairie Oil and Gas Company is starting a very important deep semi-wildcat in Harper County in section 21-T26N-R24W, 1½ miles due southwest from same company's discovery well in section 14-T26N-R24W, which was brought in for around 6,000,000 cu. ft. of wet gas from a Pennsylvanian sand at around 5,000 ft.

In southwestern Oklahoma in the old shallow Chickasha gas field, discovered 12 years ago, the first deep test of John B. Nichols in section 26-T5N-R8W encountered an oil sand at around 3,000 ft., and upon acidizing produced 150 to 200 bbl. per day.

Deepest Wells

IN CALIFORNIA the General Petroleum Corporation's (Socony-Vacuum) No. 1 Berry was still unsuccessfully testing the Carneros sand zone with a total depth of 11,377 ft. The bailing of the well failed to bring any oil and the company is planning to scrape the walls of the well before deepening it further.

In Oklahoma the Denver Producing and Refining Company's No. 1 A-Dah-Noe in section 34-T10N-R10W, in Caddo County near the town of Binger, had pipe stuck at 11,230 ft., but was not anticipating serious trouble and was expecting to resume drilling soon.

In Texas the Gulf Production Company's No. 103 McElroy, in section 197, Block F of C.C.S.D. & R.G.N.G. Survey, in Upton County, was preparing to set 7⅝-in. casing with a total depth of 10,631 ft. after having reportedly tapped Ordovician limestone objective at 10,580 ft.

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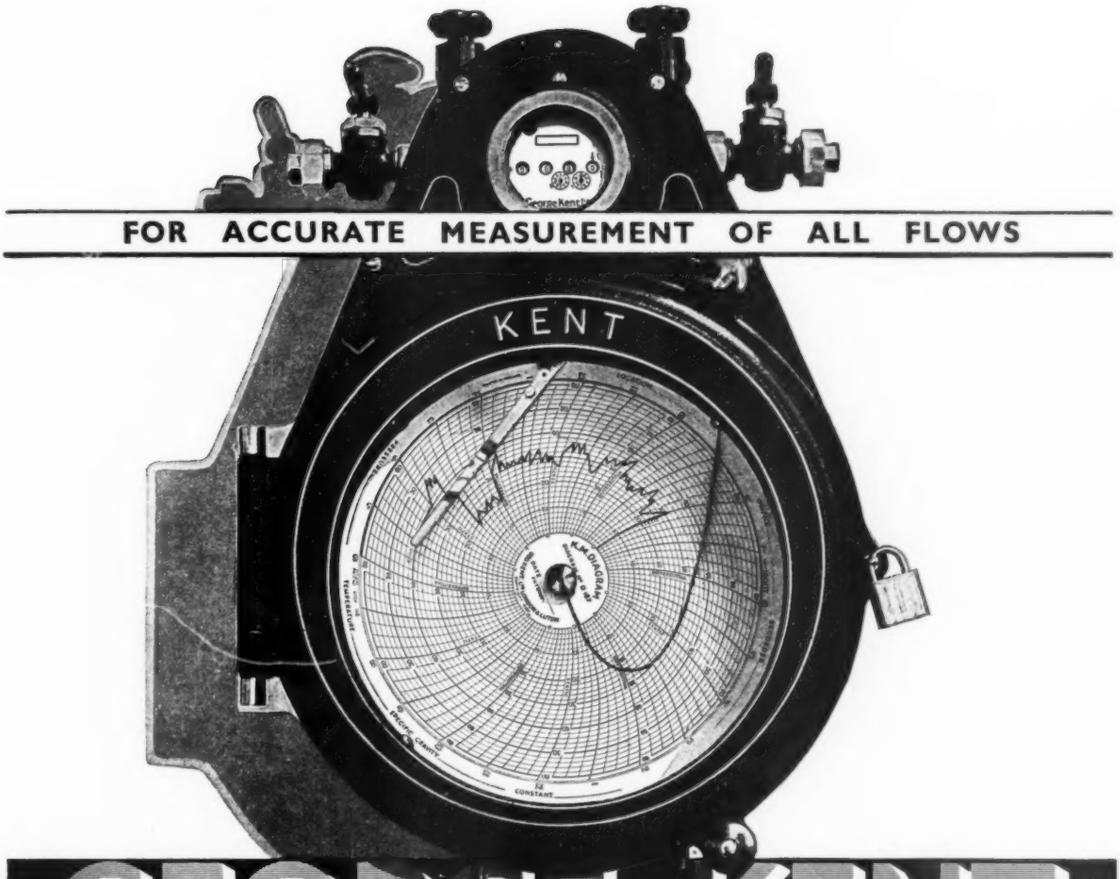

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U. S. S. R.

Official Figures for Soviet Oil Operations

1934	Crude Production (bbl.)	Daily Average (bbl.)	Run to Stills (bbl.)	Drilling (feet)
January	13,356,000	430,840	11,680,000	317,011
February	12,488,000	446,000	10,621,800	321,509
March	14,644,000	472,400	12,257,000	360,096
April	14,081,000	469,397	12,637,100	353,311
May	14,315,000	461,774	13,101,900	384,793
June	13,966,000	465,546	12,363,400	385,387
Total 6 mos. 1934	82,850,000	457,734	72,662,100	2,122,107
Total 6 mos. 1933	69,582,100	384,431	63,631,400	1,196,679
Total 1933	149,901,900	407,950	131,591,300	2,789,523
Quota 1933	170,800,000	467,670	135,000,000	3,315,000
Quota 1934	214,900,000	588,876	161,000,000	4,950,000
Possible Production 1934	175,000,000	470,000	152,000,000	4,000,000

Crude conversion: One ton = Seven bbl.

Spanish Contract Cancelled

RUSSIAN oil was supplied to the Spanish petroleum monopoly under a contract that stipulated that if notification of cancellation was not given by either party by June 30, 1934, the contract would be automatically renewed. Soyusnefteexport has now been notified on June 30 of the intention of the Spanish organization to cancel its contract. The reasons for this cancellation have not been made public as yet. Mr. Ostrofsky, Soyusnefteexport representative in Paris, is presently carrying on negotiations with a view to renewal of the contracts but it seems unlikely that this will be accomplished. The contract which has been cancelled expires at the end of this year. Russia formerly supplied about 65 percent of the Spanish requirements of approximately 600,000 tons of petroleum and products.

The Volga Project

AMONG the colossal projects which are under consideration for the near future, the Volga River extensions represent a serious problem. The making of the Volga waters available for energy and irrigation will undoubtedly affect the water level of the Caspian Sea and will possibly drain and inundate large areas of the Volga River shores as well as territories of the Caucasus along the Caspian Sea, which might cause harm to fishing and to port activities.

The preservation of the Caspian Sea level for the sake of fishing, is probably less important than the blessing in disguise which the lowering of the sea level would bring to the oil industry in the form of adding new oil bearing lands to the Apsheron peninsula, Embaneft, Turcoman territory, etc.

Several surveys made along the Caspian shore line as well as over the Caspian Sea bed have shown that the oil structure carries extensions into the sea. Gas exits, volcano eruptions in the regions over the Baku straits, which were caused by action of hydrocarbon gases, indicate that the Caspian Sea bottom holds a larger territory of oil bearing lands than the total which are under operation at present on the Apsheron peninsula. Neftdag, Cheleken, and other mud volcanoes which are situated along the southeastern shore line of the Caspian Sea, such as Boling Hill, Ak-Patalaukh, Keimir, Tiulukli, Hek Patalaukh, Komishdldja, all emanate gases at several points of the sea which indicates the presence of oil along the sea bed adjacent to the southeastern shore line.

The Emba region likewise shows oil regions extended into the Caspian Sea.

The geologists, K. Kalitzki, N. Shatsky and V. Rusentzeff have written a treatise on the possible influences of lowering the sea level 2-4-6 meters in connection with the Volga dam at Kamishin in the form of an increase of oil lands, and have pointed out that lowering the Caspian two meters would increase the oil lands of Azerbaidzan some 40 square kilometers while lowering it a depth of six meters would add 295 square kilometers to the Adzerbaidzanian lands. This, they estimate would increase potential oil reserves from 100,000,000 to 550,000,000 tons of crude oil for this section alone.

At Emba, lowering the level of the Caspian four meters would result in the reclamation of 21,533 square kilometers giving an additional estimated reserve of several million tons of crude oil.

In view of this fact the report questions whether it would be worth while to attempt to maintain the level of the Caspian to avoid damage to the fishing industry when such rich rewards could be anticipated from the oil industry.

Half Year

LABORING under adverse conditions the Soviet oil industry has completed the first half of the second year of the Second Five Year Plan with arrears against the plan of production, run to stills and drilling, although when compared with the figures for the corresponding period of last year the trend is decidedly upwards.

Production of Gasoline and Kerosene Six Months 1934 and 1933

	Production Gasoline (tons) Six Months 1934	Six Months 1933	Production Kerosene (tons) Six Months 1934	Six Months 1933
Azneft	505,800	476,800	1,580,000	1,225,000
Grozneft	856,200	843,400	865,000	613,000
Aviafuel	11,300	11,700	9,700	10,000
Neftzavodi	.....	.....	6,800	2,000
Middleasia	1,600	1,800	1,600	2,100

Drilling speed per rig month has materially improved to 509 ft. per rig month during the first quarter 1934 as against 342 ft. per rig month during the first quarter 1933.

Present Drilling Speed

	Feet per Rig-month
Azneft	623
Grozni	511
Maikop	510
Emba	191
Vostokneft	238
Average for all fields	509

Soviet Oil Exports for Four Months 1933 and 1934

	Four Months 1934 (tons)	Value (Rbl.)	Four Months 1933 (tons)	Value (Rbl.)
Crude oil	72,669	500,000	53,819	700,000
Gasoline	399,618	8,900,000	531,994	15,200,000
Kerosene	157,823	2,400,000	285,031	6,800,000
Spindle oil	8,191	100,000	13,757	300,000
Machine oil	52,976	1,300,000	58,699	1,800,000
Cylinder oil	7,717	200,000	6,171	300,000
Solar oil	8,110	100,000	16,661	400,000
Fuel oil	463,438	3,300,000	522,981	3,200,000
Diesel oil	24,283	200,000	35,292	300,000
Gasoil	199,270	2,000,000	218,387	3,000,000
All other	28,881	1,800,000	48,993	1,000,000
Total	1,421,976	20,800,000	1,761,785	33,000,000

U. S. S. R. Domestic Consumption of Petroleum Four Months 1934

	(tons)
Gasoline	170,367
Ligroin	65,089
Kerosene	916,861
Lubricating oil	125,390
Heavy lubricating oil	29,133
Lubricating Mazut	58,787
Fuel oil	2,315,478
All others	83,320
Total	3,764,425

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